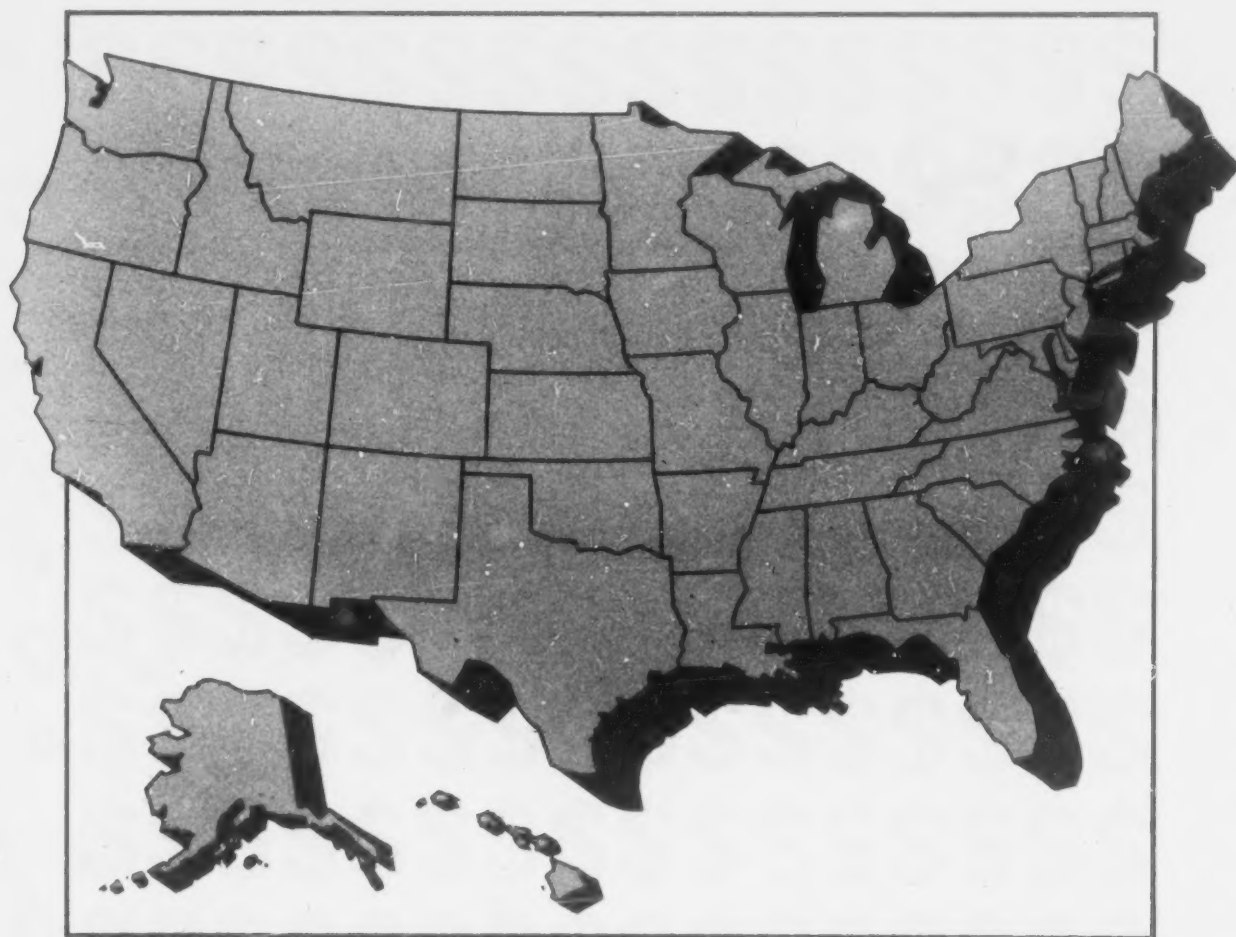


Impact of Travel on State Economies 1989



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IMPACT OF TRAVEL ON STATE ECONOMIES, 1989



**U.S. TRAVEL DATA CENTER
WASHINGTON, D.C.**

**IMPACT OF TRAVEL ON STATE ECONOMIES, 1989:
SEVENTY DOLLARS**

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The U.S. Travel Data Center is an affiliate of the Travel Industry Association of America



The U.S. Travel Data Center is the national, non-profit center for travel and tourism research. Since its establishment in 1973, the Data Center has devoted itself to advancing the common interests of the travel industry and the public it serves by encouraging, sponsoring and conducting statistical, economic, and scientific research concerning travel, the travel industry, and travel-related industries. In pursuit of this objective the Data Center gathers, analyzes, publishes and disseminates the results of such research, and cooperates with all government agencies, private industry and academic institutions with similar purposes and objectives.

The Data Center would like to take this opportunity to thank the U.S. Travel and Tourism Administration (USTTA), the Travel Industry Association (TIA), the New York Convention and Visitors Bureau, the Miami Convention and Visitors Bureau, and the National Council of State Travel Directors for their financial support of the Travel Economic Impact Model (TEIM) revision project. We greatly appreciate the data resources and assistance we received from Runzheimer International, Cruiselines International Association, Smith Travel Research, Amtrak, Greyhound, and Prentice-Hall Travel. We would also like to thank those who served as members of the Industry Advisory Committee, Industry Review Committee, and the Technical Review Committee for this project.

The U.S. Travel Data Center is an affiliate of the Travel Industry Association of America the national, non-profit association representing all components of the United States travel industry.

Jerry Foster, Chairman

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EXECUTIVE SUMMARY

- o The total (direct and indirect) impact of domestic travel spending on the U.S. economy in 1989 produced \$632.4 billion in expenditures and output, \$186.5 billion in wages and earnings, and 10.7 million jobs.
- o U.S. residents directly spent \$272 billion on travel in the U.S. in 1989. Foreign visitors directly spent another \$34.7 billion, and the total spent on travel in the U.S. was \$306.7 billion, a 5.5 percent increase over the previous year.
- o These expenditures directly generated 5.7 million jobs paying over \$79.4 billion in wages and salaries.
- o Travel spending in America generated over \$41 billion in tax revenue for federal, state and local governments.
- o California garnered the largest share of U.S. resident travel spending in the U.S. during 1988 with 14 percent of the total market followed by Florida with almost 9 percent.
- o Five states and the District of Columbia posted double-digit increases in domestic travel spending during 1989, while another 26 states grew faster than the national average of 5.5 percent.
- o In six states and the District of Columbia, jobs directly generated by travel spending exceeded those generated by all other private industries during 1989. The travel industry was among the top three employers in 25 states.
- o On the average, every \$53,200 spent on travel in the U.S. directly supported one job in 1989.

INTRODUCTION

The estimates of the economic impact of travel contained in this volume are the product of the U.S. Travel Data Center's Travel Economic Impact Model (TEIM), an economic model developed expressly to indicate the expenditures, employment, payroll, business receipts and tax revenue generated by travel away from home in the U.S.

The Data Center's Travel Economic Impact Model (TEIM) was initially developed in 1975 for the U.S. Department of the Interior to indicate the economic value of travel and tourism to states and counties. The original TEIM was revised substantially based upon the U.S. Census Bureau's 1977 National Travel Survey and 1977 Census of Service Industries and Census of Retail Trade. In 1986, the model's time series was adjusted to fit business receipts and payroll data available for each state from the 1982 Census of Service Industries and Census of Retail Trade. In 1990, the TEIM underwent a substantial revision and was benchmarked to 1987.

The TEIM is based upon national travel surveys conducted by the U.S. Bureau of the Census and the U.S. Travel Data Center, and expenditure data developed by the Bureau of the Census, the Data Center, various federal agencies and national travel organizations each year. A summary of the methodology appears in Appendix B.

The following estimates of U.S. travel's economic impact in the U.S. during 1989 are based upon the most recent version of the TEIM and data available from the U.S. Census Bureau and other sources. These estimates are not comparable to those published in previous years, although revised data for 1987 and 1988 appear in Appendix A.

It is hoped that this publication will stimulate discussion and criticism of the TEIM to promote further development and improvement. Users of these data are encouraged to communicate their reactions, both positive and negative, to the Data Center in the interests of progress in travel research.

The individual state estimates should not necessarily be viewed as substitutes for major state research projects on the impact of travel and tourism. Rather, the user should compare the methodologies and results, and draw his/her own conclusions regarding the validity of differing approaches and estimates.

1989 U.S. DOMESTIC TRAVEL EXPENDITURES

Total domestic traveler spending in the U.S., including the direct and "secondary" or indirect impact, was more than \$632 billion in 1989. This includes the original expenditures of travelers, as well as the secondary sales that arise from indirect and induced spending. These secondary impacts are described further in the "Multiplier Impact of Travel Spending in the U.S." section.

During 1989, Americans directly spent \$272 billion in the U.S. on travel away from home. This includes expenditures while traveling away from home overnight in paid accommodations or to places 100 miles or more away from home. Domestic travel spending for 1989 increased 5.5 percent over the previous year.

As indicated in Table 1, foodservice and public transportation each accounted for almost 24 percent of travel spending in 1989, to lead all categories. Traveler expenditures for foodservice also had the largest increase over 1988, 9 percent, followed by spending on general retail trade and lodging.

Table 1: 1989 U.S. Domestic Travel Expenditures

Expenditure Category	Expenditures (\$ Billions)	Percent of U.S. Total	Percent Change from 1988
Public Transportation	\$ 64.6	23.8%	1.7%
Auto Transportation	50.5	18.6	2.9
Lodging	45.3	16.7	7.8
Foodservice	64.7	23.8	9.0
Entertainment & Recreation	24.3	8.9	5.3
General Retail Trade	22.6	8.3	8.4
U.S. TOTAL	\$ 272.0	100.0%	5.5%
Foreign Visitor Generated	34.7		19.7
GRAND TOTAL	\$ 306.7		5.5%

Source: U.S. Travel Data Center, U.S. Travel and Tourism Administration

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Traveler spending for hotel/motel lodging, which rose nearly eight percent during 1989, should be distinguished from total receipts of commercial lodging facilities. The latter includes all receipts from hotels, motels and motor hotels for rooms, food, and beverages, concessions, telephone service, valet and other services to customers. The TEIM cannot distinguish meals purchased in restaurants operated by hotels and motels from those purchased in separate restaurants. Consequently, some of the food purchases estimated by the model took place in commercial lodging facilities although attributed herein to "foodservice".

This explains how changes in lodging expenditures by travelers may differ from variations in total lodging industry receipts as reported by the U.S. Bureau of the Census and other organizations. Moreover, this convention also affects TEIM estimates of travel-generated payroll and employment for lodging and foodservice.

According to the U.S. Travel and Tourism Administration, Department of Commerce, foreign visitors in 1989 spent \$34.7 billion while traveling in the U.S., an increase of 19.7 percent over 1988. This was primarily the result of a weakening U.S. dollar in terms of major foreign currencies and relatively moderate gains in worldwide economies. This spending figure covers foreign traveler expenditures in the U.S., and excludes receipts of U.S. carriers for international transportation of foreign nationals.

Total U.S. residents and foreign visitors spent \$306.7 billion on travel in the U.S. during 1989, an annual increase of 5.5 percent. The growth in travel spending during 1989 was lower than the 6.7 percent annual growth rate for the nation's gross national product (GNP), despite travel price inflation, as measured by the Travel Price Index (TPI), which increased by more than the increase in prices of all consumer goods and services. The TPI rose 5.3 percent for the year, compared to a 4.8 percent increase in the Consumer Price Index (CPI). Total direct travel spending in the U.S. represented 5.9 percent of GNP during 1989.

Table 2 indicates U.S. travel spending during 1989 in six categories by state visited. It comprises total spending by U.S. travelers in the fifty states and the District of Columbia, representing sales and gross receipts paid. The average state enjoyed \$5.33 billion in U.S. travel spending in 1989; seventeen states exceeded this. In total, 43 states and the District of Columbia, received more than one billion dollars from U.S. travelers.

Table 3 provides analytical information on U.S. travel spending in each state: percent change from the previous year, share of U.S. travel expenditures, and rank by volume of expenditures in each state. Alabama experienced the largest percentage gain of any state with an increase of almost 13 percent in travel spending. Five states and the District of Columbia posted double-digit advances over 1988, while an additional 26 states grew faster than the national average of 5.5 percent. Only five states suffered declines in travel spending from 1988. These declines were modest, and none of the five declining states lost more than five percent in travel spending over 1988 expenditures.

California led all other states in travel spending with \$38.2 billion during 1989. Florida and New York followed with \$24.4 and \$18.3 billion.

Table 2: 1989 U.S. Domestic Travel Expenditures by State

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail
Alabama	\$ 3,150.4	\$ 611.8	\$ 775.0	\$ 382.2	\$ 847.0	\$ 218.0	\$ 316.5
Alaska	999.6	277.8	138.1	192.6	250.3	53.8	87.0
Arizona	4,370.4	1,050.8	744.4	927.2	1,060.2	231.8	356.0
Arkansas	2,065.1	281.2	613.9	253.3	563.3	142.0	211.4
California	38,241.2	11,015.8	7,327.9	6,341.2	8,354.4	2,486.5	2,715.4
Colorado	4,844.0	1,204.7	1,284.1	846.4	971.4	215.4	322.1
Connecticut	3,021.6	1,426.3	389.9	398.1	512.6	118.9	175.9
Delaware	748.3	222.5	155.8	111.2	159.5	38.9	60.3
Florida	24,437.4	4,315.3	2,761.9	5,455.1	6,698.1	2,749.5	2,457.6
Georgia	7,053.6	1,337.8	1,145.9	1,271.6	2,031.4	528.9	738.0
Hawaii	5,492.3	1,320.9	201.6	1,905.7	1,403.3	259.0	401.7
Idaho	1,179.0	242.7	536.6	114.1	181.3	40.6	63.7
Illinois	10,865.3	3,272.8	2,278.6	1,631.1	2,397.4	559.0	726.0
Indiana	3,493.1	711.8	885.3	490.7	889.8	218.3	297.2
Iowa	2,341.1	326.5	932.6	244.1	498.3	144.2	195.4
Kansas	2,175.7	528.4	670.9	211.4	464.2	120.4	180.3
Kentucky	2,901.4	500.6	705.7	390.3	797.6	207.7	299.5
Louisiana	4,160.5	600.5	986.4	776.0	1,112.0	269.9	415.7
Maine	1,357.3	283.4	263.4	259.7	330.3	97.2	123.3
Maryland	4,272.8	944.9	894.4	735.9	1,088.8	246.8	362.1
Massachusetts	6,251.5	2,551.0	805.1	1,152.7	1,081.1	271.0	390.6
Michigan	6,426.8	1,595.2	1,654.0	860.6	1,452.3	397.6	467.2
Minnesota	3,587.3	863.4	758.0	501.0	914.6	233.3	317.0
Mississippi	1,820.7	343.2	437.4	224.0	499.5	130.1	186.5
Missouri	5,393.3	1,439.4	1,421.2	612.1	1,162.0	353.2	405.4
Montana	1,178.8	218.4	484.4	135.3	210.9	49.5	80.3
Nebraska	1,508.6	237.8	486.2	164.3	379.8	98.0	142.4

Nevada	9,752.8	859.9	703.3	1,285.8	2,053.3	4,231.0	619.5
New Hampshire	1,120.3	375.9	153.0	197.8	234.3	71.0	88.3
New Jersey	8,974.1	2,281.8	847.5	1,135.3	1,440.3	2,749.3	520.0
New Mexico	2,007.2	396.7	586.1	308.0	446.2	120.9	149.2
New York	18,301.0	6,139.8	2,591.5	3,401.7	3,842.8	1,013.9	1,311.3
North Carolina	6,305.9	954.2	1,019.1	1,068.1	1,985.7	537.5	741.2
North Dakota	702.4	92.1	219.1	82.6	194.9	45.1	68.6
Ohio	7,253.3	1,730.2	1,794.9	944.3	1,689.1	552.1	542.7
Oklahoma	2,362.3	391.4	735.4	278.2	579.6	152.5	225.2
Oregon	3,141.0	871.0	562.4	471.6	763.7	182.7	289.6
Pennsylvania	8,664.4	2,385.2	1,903.7	1,184.9	1,842.5	650.2	697.9
Rhode Island	620.5	244.0	125.3	94.8	93.8	29.1	33.4
South Carolina	3,937.1	478.9	769.8	819.9	1,146.4	291.0	431.2
South Dakota	678.5	60.9	233.1	83.1	184.8	47.9	68.6
Tennessee	5,530.1	853.3	999.2	903.4	1,648.0	513.2	612.9
Texas	15,543.1	3,494.9	2,895.0	2,364.1	4,136.1	1,113.2	1,539.8
Utah	2,117.3	522.4	644.2	282.8	423.4	105.7	138.8
Vermont	889.1	156.9	110.0	210.8	258.4	57.9	95.1
Virginia	7,826.7	1,337.2	1,475.7	1,485.4	2,163.4	598.3	766.8
Washington	4,451.0	1,480.7	796.9	628.1	978.7	223.8	342.9
West Virginia	1,160.8	144.9	329.2	193.4	304.7	75.5	113.2
Wisconsin	3,646.6	793.6	785.4	525.7	981.4	234.6	325.8
Wyoming	990.2	222.2	235.6	158.4	235.6	52.8	85.7
Washington DC	2,714.3	634.8	241.2	625.4	800.3	161.9	250.8
TOTAL	\$272,027.1	\$ 64,627.6	\$ 50,495.1	\$ 45,321.3	\$ 64,738.7	\$ 24,291.1	\$ 22,553.2

Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

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Table 3: State Ranking of 1989 Domestic Travel Expenditures

State	1989 Travel Expenditures (\$ Millions)	Change From 1988 (Percent)	Share of U.S. Total (Percent)	State Rank
Alabama	\$ 3,150.4	12.8%	1.2%	27
Alaska	999.6	6.7	0.4	45
Arizona	4,370.4	10.5	1.6	20
Arkansas	2,065.1	3.7	0.8	36
California	38,241.2	0.3	14.1	1
Colorado	4,844.0	4.7	1.8	18
Connecticut	3,021.6	3.3	1.1	29
Delaware	748.3	0.4	0.3	48
Florida	24,437.4	9.3	9.0	2
Georgia	7,053.6	8.6	2.6	11
Hawaii	5,492.3	4.8	2.0	16
Idaho	1,179.0	3.2	0.4	41
Illinois	10,865.3	8.9	4.0	5
Indiana	3,493.1	8.6	1.3	26
Iowa	2,341.1	8.7	0.9	33
Kansas	2,175.7	6.5	0.8	34
Kentucky	2,901.4	8.5	1.1	30
Louisiana	4,160.5	4.7	1.5	22
Maine	1,357.3	4.7	0.5	40
Maryland	4,272.8	6.6	1.6	21
Massachusetts	6,251.5	-3.3	2.3	14
Michigan	6,426.8	7.1	2.4	12
Minnesota	3,587.3	9.7	1.3	25
Mississippi	1,820.7	12.2	0.7	38
Missouri	5,393.3	9.1	2.0	17
Montana	1,178.8	5.2	0.4	42
Nebraska	1,508.6	9.2	0.6	39

Table 3: State Ranking of 1989 Domestic Travel Expenditures (Continued)

State	1989 Travel Expenditures (\$ Millions)	Change From 1988 (Percent)	Share of U.S. Total (Percent)	State Rank
Nevada	\$ 9,752.8	6.9%	3.6%	6
New Hampshire	1,120.3	-2.1	0.4	44
New Jersey	8,974.1	-1.6	3.3	7
New Mexico	2,007.2	7.9	0.7	37
New York	18,301.0	6.7	6.7	3
North Carolina	6,305.9	7.9	2.3	13
North Dakota	702.4	11.4	0.3	49
Ohio	7,253.3	8.9	2.7	10
Oklahoma	2,362.3	4.4	0.9	32
Oregon	3,141.0	-2.6	1.2	28
Pennsylvania	8,664.4	4.5	3.2	8
Rhode Island	620.5	5.8	0.2	51
South Carolina	3,937.1	7.6	1.4	23
South Dakota	678.5	12.2	0.2	50
Tennessee	5,530.1	8.6	2.0	15
Texas	15,543.1	7.2	5.7	4
Utah	2,117.3	5.0	0.8	35
Vermont	889.1	-4.8	0.3	47
Virginia	7,826.7	3.4	2.9	9
Washington	4,451.0	3.2	1.6	19
West Virginia	1,160.8	7.9	0.4	43
Wisconsin	3,646.6	7.4	1.3	24
Wyoming	990.2	6.5	0.4	46
Washington DC	2,714.3	10.1	1.0	31
TOTAL	\$272,027.1	5.5%	100.0%	

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Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

1989 U.S. DOMESTIC TRAVEL GENERATED BUSINESS RECEIPTS

Travel generated business receipts differ from travel expenditures by excluding federal, state, local and territorial retail sales, hotel occupancy, admission and other taxes collected by establishments directly from customers and paid directly to taxing authorities. These estimates are useful for comparison with business sales and receipts data published by the U.S. Department of Commerce.

In 1989, travel related businesses in the 50 states and the District of Columbia enjoyed sales of \$259.7 billion from American residents traveling within the U.S. This represents an 5.4 percent increase over the 1988 total.

As indicated in Table 4, the foodservice sector generated 24 percent of total travel generated business receipts. Included in this total are food and beverage services in hotels and motels as well as other retail eating and drinking places. Consequently, the business receipts shown below for the lodging industry will be smaller than most published estimates because they exclude revenue from food and beverage service.

Table 4: 1989 U.S. Domestic Travel Generated Business Receipts

Industry Category	Business Receipts (\$ Billions)	Percent of U.S. Total	Percent of Expenditures
Public Transportation	\$ 61.1	23.5%	94.5%
Auto Transportation	49.0	18.9	97.1
Lodging	42.6	16.4	94.0
Foodservice	62.3	24.0	96.3
Entertainment & Recreation	23.4	9.0	96.3
General Retail Trade	21.4	8.2	94.7
U.S. TOTAL	\$ 259.7	100.0%	95.5%
Foreign Visitor Generated	33.0		
GRAND TOTAL	\$ 292.7		

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The public transportation sector accounted for slightly less than foodservice with 23.5 percent of total business receipts, while auto transportation generated nearly 19 percent.

Overall, travel generated business receipts comprise 95.5 percent of travel spending in the U.S. The balance is accounted for by retail sales taxes. Among the categories, the proportions range from 94 percent for lodging to over 97 percent for auto transportation. This indicates that lodging is taxed more heavily at the retail level as compared to auto transportation.

During 1989, all travelers (foreign and domestic) in the U.S. produced \$292.7 billion in sales revenue for American business firms. The Data Center estimates business receipts resulting from foreign visitor expenditures produced \$33.0 billion of these business receipts, but these currently cannot be distributed among the business categories or the states as can U.S. traveler generated receipts.

Table 5 details how business receipts produced by U.S. travel expenditures are distributed among six industry categories for each of the fifty states and the District of Columbia. Businesses in the average state earned receipts of \$5.1 billion in 1989.

The states' ranking generally follows travel expenditures. California was first in travel generated business receipts with \$34.6 billion and Florida followed with \$22.5 billion. In all, five states enjoyed more than \$10 billion in these business receipts, while 42 states and the District of Columbia received more than \$1 billion.



Table 5: 1989 State Domestic Travel Generated Business Receipts

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail
Alabama	\$ 2,834.4	\$ 394.8	\$ 762.1	\$ 362.9	\$ 807.8	\$ 206.8	\$ 299.9
Alaska	1,162.4	444.7	137.8	191.6	248.6	53.6	86.0
Arizona	4,131.5	973.3	732.5	858.0	1,013.1	218.8	335.8
Arkansas	1,877.6	176.1	598.8	242.3	522.6	135.2	202.5
California	34,559.9	8,537.2	6,997.6	5,908.5	8,066.1	2,480.3	2,570.2
Colorado	5,063.8	1,537.9	1,267.1	806.8	934.1	211.4	306.4
Connecticut	1,976.6	462.7	371.5	371.3	488.6	118.9	163.6
Delaware	633.3	113.1	155.2	106.1	159.5	38.9	60.3
Florida	22,515.9	3,370.3	2,699.9	5,049.1	6,481.3	2,595.8	2,319.6
Georgia	8,591.7	3,081.0	1,118.1	1,218.3	1,952.0	513.5	708.8
Hawaii	4,786.7	776.7	192.9	1,832.4	1,349.3	249.1	386.3
Idaho	1,034.5	126.2	529.4	107.0	172.7	38.6	60.6
Illinois	11,016.4	3,785.0	2,164.3	1,522.0	2,302.0	559.3	683.8
Indiana	3,204.1	540.6	839.7	460.3	862.1	218.3	283.1
Iowa	2,109.9	147.5	920.5	228.9	486.5	138.7	187.9
Kansas	1,855.5	263.1	659.4	202.9	443.2	115.2	171.7
Kentucky	3,031.6	711.6	687.7	372.7	776.5	197.8	285.2
Louisiana	3,916.3	546.6	947.2	727.3	1,052.7	253.0	389.6
Maine	1,155.9	121.4	256.7	243.1	320.2	97.2	117.4
Maryland	3,788.4	602.4	872.2	680.9	1,056.8	231.2	344.8
Massachusetts	4,772.0	1,193.1	779.9	1,074.9	1,081.1	271.0	372.0
Michigan	6,099.8	1,423.9	1,600.9	828.5	1,415.0	382.3	449.2
Minnesota	4,668.1	2,056.2	754.4	463.7	876.3	218.5	299.0
Mississippi	1,676.1	269.6	426.8	209.8	471.3	122.7	175.9
Missouri	5,738.1	1,948.4	1,389.1	578.8	1,105.9	333.9	382.1
Montana	1,074.7	120.2	482.8	131.0	210.9	49.5	80.3
Nebraska	1,346.2	117.6	476.3	154.3	369.4	92.5	136.2

Nevada	8,900.2	310.8	698.6	1,258.2	1,962.9	4,084.0	585.6
New Hampshire	850.2	126.6	153.0	186.8	224.5	71.0	88.3
New Jersey	7,848.0	1,474.8	824.2	1,075.7	1,389.1	2,593.6	490.5
New Mexico	1,737.2	192.7	578.4	286.8	423.3	114.5	141.4
New York	17,720.1	6,146.0	2,512.3	3,191.0	3,691.5	947.6	1,231.6
North Carolina	6,819.6	1,626.7	1,005.2	1,029.3	1,914.9	532.2	711.2
North Dakota	651.4	59.6	217.9	78.0	188.2	42.7	65.0
Ohio	6,393.4	1,057.7	1,744.6	893.2	1,631.0	552.1	514.7
Oklahoma	3,088.0	1,286.2	633.6	261.9	550.5	143.6	212.1
Oregon	2,614.4	356.2	562.4	459.7	763.7	182.7	289.6
Pennsylvania	7,841.4	1,776.6	1,855.8	1,122.0	1,778.3	650.2	658.4
Rhode Island	450.7	90.2	119.9	89.6	90.3	29.1	31.5
South Carolina	3,594.9	307.8	754.5	753.6	1,090.2	279.1	409.7
South Dakota	632.8	37.1	229.1	79.4	176.1	46.0	65.1
Tennessee	6,438.2	2,035.4	970.0	840.1	1,545.6	477.2	569.9
Texas	16,808.2	5,319.3	2,808.2	2,211.3	3,977.0	1,050.2	1,442.3
Utah	2,135.8	613.5	633.3	263.4	397.2	98.8	129.7
Vermont	746.3	43.1	107.7	199.3	249.0	55.7	91.4
Virginia	8,374.2	2,159.9	1,448.9	1,388.7	2,059.1	590.7	726.9
Washington	4,185.6	1,365.9	768.7	581.7	933.5	218.3	317.5
West Virginia	1,061.0	91.1	319.9	183.2	288.1	71.5	107.2
Wisconsin	3,080.7	329.3	766.5	500.7	950.6	223.4	310.3
Wyoming	863.2	117.8	233.1	152.3	226.8	51.0	82.2
Washington DC	2,286.9	287.6	241.2	568.5	800.3	152.8	236.6
TOTAL	\$259,743.8	\$ 61,053.3	\$ 49,007.8	\$ 42,587.5	\$ 62,327.5	\$ 23,400.2	\$ 21,367.3

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Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

2

1989 U.S. DOMESTIC TRAVEL GENERATED PAYROLL

Domestic travel spending by U.S. residents directly generated nearly \$70 billion in wage and salary, or payroll, income during 1989. This was an 5.7 percent rise over the previous year. Table 6 shows the distribution of payroll income directly generated by U.S. travel spending in the states among broad industry categories.

Payroll generated by travel spending on public transportation accounted for about 34 percent of the total, followed by foodservice, with 21 percent. Travel planning, general retail trade, and auto transportation industries accounted for the smallest proportions of total travel generated payroll. However, the business category with the highest growth rate in travel generated payroll was travel planning with an increase of 9.5 percent, followed by foodservice with an increase of over 9.1 percent. Public transportation and lodging each experienced more than an seven percent rise in travel payroll in 1989.

Table 6: 1989 U.S. Domestic Travel Generated Payroll

Industry Category	Payroll (\$ Billions)	Percent of U.S. Total	Percent Change from 1988
Public Transportation	\$ 23.9	34.3%	7.3%
Auto Transportation	3.8	5.5	-0.2
Lodging	11.6	16.6	7.8
Foodservice	14.8	21.2	9.1
Entertainment & Recreation	8.7	12.5	-4.2
General Retail Trade	3.3	4.7	5.0
Travel Planning	3.6	5.2	9.5
U.S. TOTAL	\$ 69.8	100.0%	5.7%
Foreign Visitor Generated	9.6		18.5
GRAND TOTAL	\$ 79.4		7.1%

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Foreign visitors in the states accounted for \$9.6 billion in U.S. payroll. U.S. wage and salary income directly generated by spending of all travelers in the

states and territories reached \$79.4 billion in 1989, an increase of 7.1 percent over the previous year, and a higher growth rate for wage and salary disbursements generated by U.S. resident spending at home. This can partly be attributed to the almost 19 percent increase in foreign visitor spending over last year's spending.

A dollar of travel spending generates different amounts of payroll income in different sectors of the travel industry depending on labor content of the service and the wage structure. For example, public transportation accounts for 24 percent of travel spending but 34 percent of travel-generated payroll. This reflects the relatively high wage structure in public transportation and the importance of labor in producing this service.

Auto transportation, on the other hand, requires less labor per dollar of receipts, and gasoline service station employees receive relatively low wages. Consequently, auto transportation comprises approximately 19 percent of U.S. travel spending, but less than six percent of travel-generated payroll.

Table 7 displays payroll income generated by U.S. travelers in each of the 50 states and the District of Columbia during 1989.

The average state benefitted from nearly \$1.4 billion in U.S. travel generated wage and salary income. California led all states with \$9.5 billion of this income, followed by Florida with \$5.6 billion. Twenty-one states received more than one billion dollars in travel-generated wage and salary income.

On the other hand, ten states indicated less than \$200 million in travel-generated payroll for 1989.



Table 7: 1989 U.S. Domestic Travel Generated Payroll by State

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail	Travel Planning
Alabama	\$ 506.1	\$ 82.8	\$ 52.5	\$ 82.0	\$ 161.7	\$ 70.1	\$ 39.0	\$ 17.9
Alaska	348.6	187.3	13.3	47.2	57.7	16.2	10.0	16.9
Arizona	1,102.4	383.6	53.1	226.0	267.0	79.6	50.2	43.0
Arkansas	328.2	46.1	33.0	52.2	110.7	46.6	31.7	7.9
California	9,541.7	3,350.8	565.9	1,711.6	1,992.1	950.2	379.4	591.6
Colorado	1,411.2	645.3	95.9	220.3	261.2	80.9	44.7	62.9
Connecticut	609.8	158.8	35.0	124.2	131.5	54.2	30.6	75.5
Delaware	161.8	60.8	8.9	29.4	34.7	13.7	6.8	7.5
Florida	5,645.7	1,252.2	189.7	1,229.6	1,482.7	891.6	353.0	246.9
Georgia	2,615.8	1,335.7	86.8	301.6	451.5	216.9	110.7	112.7
Hawaii	1,414.7	332.3	22.4	507.8	309.0	112.1	41.4	89.7
Idaho	164.3	31.7	35.4	24.4	42.7	13.7	8.9	7.4
Illinois	3,327.1	1,612.9	173.1	419.2	572.4	212.7	120.8	216.0
Indiana	755.9	228.3	59.2	116.9	200.6	81.4	39.1	30.4
Iowa	356.7	36.3	70.4	60.0	104.1	44.0	28.7	13.2
Kansas	344.9	46.5	54.1	45.3	104.1	46.3	24.0	24.6
Kentucky	710.7	264.9	51.6	97.7	171.7	73.1	36.4	15.2
Louisiana	811.8	184.6	66.9	175.0	235.6	80.5	48.5	20.8
Maine	229.5	28.9	16.3	56.2	76.0	28.2	16.8	7.1
Maryland	985.3	231.6	70.6	191.9	285.4	95.0	53.6	57.2
Massachusetts	1,525.9	463.4	68.8	348.1	280.6	115.0	61.1	188.9
Michigan	1,466.8	551.8	117.1	231.2	314.8	132.7	26.1	93.1
Minnesota	1,486.5	878.2	65.6	125.3	207.1	92.4	48.9	69.0
Mississippi	326.0	67.7	32.9	55.3	93.7	43.9	25.5	7.1
Missouri	1,638.5	773.3	101.6	163.1	270.5	152.1	63.3	114.5
Montana	180.5	33.4	37.1	32.2	48.1	13.1	11.8	4.9
Nebraska	248.2	32.8	38.3	34.2	81.4	28.7	19.3	13.6

Nevada	2,904.9	119.1	120.0	412.6	520.6	1,596.8	116.1	19.8
New Hampshire	189.5	25.3	12.0	55.9	54.6	19.1	10.3	12.3
New Jersey	2,413.1	541.2	68.5	313.2	335.9	891.5	81.4	181.4
New Mexico	335.8	55.7	39.5	67.4	110.2	33.7	17.6	11.8
New York	5,370.6	2,284.3	213.6	966.8	936.5	404.0	196.2	369.2
North Carolina	1,814.8	694.0	62.0	269.0	422.0	199.1	127.4	41.3
North Dakota	108.6	13.6	15.2	16.7	37.8	14.4	7.6	3.2
Ohio	1,496.2	359.3	123.9	238.7	387.5	208.5	92.8	85.5
Oklahoma	904.7	552.6	79.2	61.9	119.8	43.5	30.5	17.2
Oregon	609.5	132.2	44.8	123.1	169.9	68.7	38.7	32.1
Pennsylvania	1,996.4	669.1	132.9	314.8	386.9	255.1	99.0	138.5
Rhode Island	169.5	28.6	9.9	81.1	22.6	9.7	5.0	12.6
South Carolina	738.4	106.1	46.5	166.4	233.1	103.0	66.0	17.3
South Dakota	114.4	10.9	16.4	22.1	36.7	15.9	8.9	3.5
Tennessee	1,746.2	840.6	63.3	207.8	350.0	146.1	97.4	41.1
Texas	4,781.4	2,219.1	206.9	565.9	963.7	399.5	224.2	202.1
Utah	544.4	244.3	45.9	66.7	99.9	39.7	21.8	26.1
Vermont	159.6	14.4	8.3	56.8	55.7	5.8	12.5	6.0
Virginia	2,272.9	899.8	112.4	342.4	453.9	238.2	138.5	87.7
Washington	1,173.9	556.4	56.6	160.5	201.9	83.6	42.7	72.2
West Virginia	186.1	23.0	23.1	43.4	57.1	21.6	14.8	3.0
Wisconsin	681.8	107.7	54.2	135.1	203.0	88.6	45.7	47.6
Wyoming	167.0	18.3	22.6	36.1	58.3	16.3	12.7	2.6
Washington DC	626.1	108.6	19.9	177.9	215.9	37.2	33.0	33.6
TOTAL	\$ 69,750.2	\$ 23,926.1	\$ 3,812.9	\$ 11,610.0	\$ 14,782.1	\$ 8,724.6	\$ 3,271.4	\$ 3,623.1

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Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.



1989 U.S. DOMESTIC TRAVEL GENERATED EMPLOYMENT

U.S. travel expenditures on domestic trips directly generated nearly five million jobs during 1989, a 2.6 percent increase from 1988. Table 8 displays the distribution of these jobs among major travel industry categories.

Foodservice accounted for 35 percent of all travel generated jobs in 1989. As discussed in earlier sections, a portion of this employment occurs in hotels and other lodging places rather than individual eating and drinking places and is often included in measures of total lodging employment.

Spending on lodging while traveling away from home generated over one million jobs, or over one-fifth of total travel employment, and accounted for as many jobs as all transportation components combined. Foodservice had the highest employment growth over 1988. Employment also increased by four percent or more in the travel planning and public transportation sectors.

Table 8: 1989 U.S. Domestic Travel Generated Employment

Industry Category	Employment (Thousands)	Percent of U.S. Total	Percent Change from 1988
Public Transportation	786.7	16.0%	4.0%
Auto Transportation	248.5	5.1	-2.8
Lodging	1,089.0	22.1	3.3
Foodservice	1,709.8	34.8	4.9
Entertainment & Recreation	634.7	12.9	-4.2
General Retail Trade	257.5	5.2	3.4
Travel Planning	192.8	3.9	4.7
U.S. TOTAL	4,918.9	100.0%	2.6%
Foreign Visitor Generated	760.7		21.0
GRAND TOTAL	5,679.6		4.8%

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Travel generated employment grew a moderate three percent in lodging and retail trade. However, employment decreased in auto transportation and entertainment and recreation.

Foreign visitors to the U.S. accounted for about 761 thousand U.S. jobs, an increase of 21 percent from 1988. In total, travel expenditures in the U.S. directly generated 5.7 million full- and part-time jobs for American residents during 1989, 5.2 percent of total nonagricultural payroll employment in the nation. The U.S. travel-generated employment growth rate of 2.6 percent from 1988 was consistent than the 2.7 percent growth rate in total U.S. nonagricultural employment.

The increase in the number of U.S. jobs attributable to travel spending in 1989 is not necessarily a net addition to the nation's employment. The increase is the sum of additional jobs created by rising travel activity and existing jobs that are now serving travel demand rather than local demand.

For example, an increase in foodservice employment in a state can be comprised of: a net increase in restaurant jobs due to more travelers purchasing meals, plus an increase in the number of existing workers serving tourists rather than local residents.

The ratio of travel expenditures to jobs directly generated by this spending indicates the average spending needed to directly support one job in the travel industry in 1989 was \$53,200. This magnitude changes each year in response to changes in wage rates, the full-time/part-time/seasonal employment mix in the industry, and the distribution of travel spending among the industry components.

Table 9 offers perspectives on the importance of travel generated employment in each state and the District of Columbia. U.S. resident domestic travel spending generated 4.5 percent of total nonagricultural payroll employment in this country during 1989.

California and Florida ranked as the top two travel generated employers with a combined one-fifth of the total employment. Number three ranked Texas and fourth ranked New York together made up another 12.3 percent of the total employment. Taken together, these top four states made up nearly one-third of the total travel generated employment.

U.S. travel away from home in 1989 directly generated more jobs than any other private industry in 7 states and is among the top three employers in 25 states and the

District of Columbia. For the U.S. overall, employment directly generated by U.S. travel ranks fourth behind the health services, business services and the part of the eating and drinking places industries which is attributable to local residents' consumption. Appendix C contains a listing by state of the industry groups that exceeded travel in producing jobs during 1989.

Table 10 shows employment in each of the fifty states and the District of Columbia directly attributable to U.S. travel spending in 1989. In all, 15 states enjoyed more than one hundred thousand travel generated jobs in 1989. Ten states in all had fewer than twenty thousand such jobs in 1989. The average state claimed almost 96 thousand jobs directly attributable to travel spending.

**Table 9: 1989 State Domestic Travel Generated Employment,
Share of Total Employment, Rank Among Other Industries**

State	Travel Generated Employment (Thousands)	Share of Total Emp . /ment (Percent)	State Rank
Alabama	50.9	1.0%	30
Alaska	18.8	0.4	44
Arizona	91.9	1.9	18
Arkansas	37.4	0.8	35
California	590.4	12.0	1
Colorado	96.4	2.0	16
Connecticut	38.6	0.8	33
Delaware	12.2	0.2	50
Florida	435.2	8.8	2
Georgia	154.0	3.1	8
Hawaii	89.7	1.8	19
Idaho	18.7	0.4	45
Illinois	198.2	4.0	6
Indiana	71.0	1.4	26
Iowa	43.1	0.9	31
Kansas	37.1	0.8	36
Kentucky	63.4	1.3	27
Louisiana	72.8	1.5	24
Maine	23.4	0.5	40
Maryland	72.1	1.5	25
Massachusetts	92.7	1.9	17
Michigan	113.5	2.3	14
Minnesota	82.9	1.7	20
Mississippi	34.1	0.7	38
Missouri	107.8	2.2	15
Montana	19.3	0.4	43
Nebraska	29.5	0.6	39

**Table 9: 1989 State Domestic Travel Generated Employment,
Share of Total Employment, Rank Among Other Industries (Continued)**

State	Travel Generated Employment (Thousands)	Share of Total Employment (Percent)	State Rank
Nevada	204.2	4.2%	5
New Hampshire	17.0	0.3	47
New Jersey	146.1	3.0	10
New Mexico	35.9	0.7	37
New York	290.6	5.9	4
North Carolina	137.4	2.8	11
North Dakota	14.2	0.3	49
Ohio	134.3	2.7	12
Oklahoma	53.1	1.1	29
Oregon	57.2	1.2	28
Pennsylvania	148.9	3.0	9
Rhode Island	8.7	0.2	51
South Carolina	75.5	1.5	22
South Dakota	14.4	0.3	48
Tennessee	126.3	2.6	13
Texas	316.2	6.4	3
Utah	41.4	0.8	32
Vermont	17.8	0.4	46
Virginia	157.3	3.2	7
Washington	76.8	1.6	21
West Virginia	19.3	0.4	42
Wisconsin	73.7	1.5	23
Wyoming	20.1	0.4	41
Washington DC	37.5	0.8	34
TOTAL	4,918.9	100.0%	

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Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

Table 10: 1989 State Domestic Travel Generated Employment

1.0 = 1 Thousand Jobs

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail	Travel Planning
Alabama	50.9	4.9	3.7	10.1	20.8	6.8	3.5	1.1
Alaska	18.8	6.3	0.7	4.3	4.6	1.4	0.6	0.9
Arizona	91.9	15.4	3.6	24.6	35.0	6.3	3.9	3.1
Arkansas	37.4	2.4	2.5	8.0	16.2	5.3	2.5	0.6
California	590.4	101.3	33.6	151.5	198.1	49.1	25.9	30.9
Colorado	96.4	19.7	6.5	23.7	32.7	6.2	3.8	3.8
Connecticut	38.6	5.8	1.6	10.0	12.0	3.6	1.9	3.7
Delaware	12.2	2.5	0.7	2.6	4.1	1.3	0.6	0.5
Florida	435.2	45.8	12.4	114.1	160.8	60.4	27.7	14.0
Georgia	154.0	34.5	5.3	30.4	52.8	17.2	8.6	5.2
Hawaii	89.7	11.5	1.3	31.1	28.9	9.0	2.8	5.1
Idaho	18.7	1.9	3.2	3.6	6.7	2.0	0.8	0.5
Illinois	198.2	50.4	9.7	36.9	65.4	15.7	8.6	11.6
Indiana	71.0	10.4	4.1	15.4	27.9	7.6	3.5	2.1
Iowa	43.1	2.2	6.2	8.4	16.9	5.7	2.7	0.9
Kansas	37.1	3.4	4.1	5.9	14.3	5.5	2.2	1.6
Kentucky	63.4	12.3	3.8	12.8	22.8	7.1	3.5	1.0
Louisiana	72.8	7.5	4.4	18.1	29.9	7.2	4.3	1.4
Maine	23.4	1.7	1.1	6.3	9.7	2.7	1.3	0.5
Maryland	72.1	9.0	4.3	17.3	27.6	6.7	4.2	3.1
Massachusetts	92.7	15.5	3.4	26.8	27.4	7.8	4.3	7.6
Michigan	113.5	17.8	7.0	26.7	40.9	10.6	4.9	5.5
Minnesota	82.9	21.2	4.1	14.4	28.0	7.6	3.8	3.7
Mississippi	34.1	3.7	2.3	6.6	13.6	5.0	2.4	0.5
Missouri	107.8	22.9	7.7	17.7	36.2	12.9	5.2	5.1
Montana	19.3	1.7	3.2	3.9	7.3	1.6	1.1	0.4
Nebraska	29.5	1.8	3.2	5.2	12.8	3.8	1.9	0.9

Nevada	204.2	5.4	8.1	24.0	58.5	99.0	7.9	1.4
New Hampshire	17.0	0.9	0.7	5.9	6.3	1.7	0.8	0.7
New Jersey	146.1	19.9	3.7	17.7	30.7	61.2	5.3	7.5
New Mexico	35.9	2.7	3.2	8.5	15.5	3.6	1.6	0.8
New York	290.6	69.2	11.9	69.6	89.6	20.1	12.9	17.2
North Carolina	137.4	21.2	3.8	27.2	53.8	17.8	11.1	2.4
North Dakota	14.2	0.8	1.3	2.5	6.4	2.2	0.8	0.2
Ohio	134.3	15.8	8.6	26.8	51.8	18.0	7.9	5.5
Oklahoma	53.1	17.1	4.3	7.4	16.0	4.5	2.8	1.1
Oregon	57.2	5.0	3.6	15.4	21.8	6.4	2.9	2.2
Pennsylvania	148.9	24.5	9.2	31.5	48.2	19.9	7.9	7.7
Rhode Island	8.7	1.2	0.5	2.4	2.6	0.8	0.4	0.7
South Carolina	75.5	4.8	3.4	19.6	30.3	10.2	6.0	1.1
South Dakota	14.4	0.6	1.3	2.8	6.2	2.3	0.9	0.2
Tennessee	126.3	31.0	4.4	26.4	42.3	11.3	8.4	2.5
Texas	316.2	72.6	12.3	61.5	110.2	31.6	17.5	10.6
Utah	41.4	6.5	3.9	7.4	16.1	4.0	2.0	1.5
Vermont	17.8	0.6	0.6	8.0	6.7	0.6	1.0	0.4
Virginia	157.3	25.9	7.1	34.1	53.2	21.6	11.2	4.3
Washington	76.8	16.7	3.8	17.0	24.4	7.2	3.2	4.5
West Virginia	19.3	0.9	1.8	4.6	8.0	2.4	1.4	0.2
Wisconsin	73.7	4.6	4.1	17.6	31.4	8.9	4.0	3.2
Wyoming	20.1	1.5	2.0	4.4	9.0	1.7	1.3	0.2
Washington DC	37.5	3.6	1.1	10.3	17.4	1.7	1.9	1.5
TOTAL	4,918.9	786.7	248.5	1,089.0	1,709.8	634.7	257.5	192.8

Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

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1989 U.S. DOMESTIC TRAVEL GENERATED TAX RECEIPTS

Travel expenditures and the business and personal income they generate produce tax revenue for federal, state and local governments. U.S. travelers directly generated over \$36 billion in tax revenue during 1989, up over 5 percent from 1988.

Table 11 shows the distribution of 1989 travel generated tax revenue among levels of government. The federal government accounted for more than one-half of the tax revenue earned from travel spending during 1989. State governments received almost one-third while local governments garnered almost fifteen percent.

Table 11: 1989 U.S. Domestic Travel Generated Tax Receipts

Level of Government	Tax Receipts (\$ Billions)	Percent of U.S. Total	Percent Change from 1988
Federal Tax	\$ 20.5	56.3%	5.0%
State Tax	10.4	28.6	3.0
Local Tax	5.5	15.1	10.2
U.S. TOTAL	\$ 36.4	100.0%	5.2%
Foreign Visitor Generated	4.8		
GRAND TOTAL	\$ 41.2		

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The 5.2 percent increase in travel generated tax revenue for all governments in 1989 was lower than the 8 percent growth in total tax revenue. Federal government tax collections also rose 8.4 percent nationally while federal tax revenue directly attributable to travel expenditures rose 5 percent. State tax revenue increased 7.5 percent nationally compared to a 3 percent rise in state travel generated tax revenue. Total local government tax revenue grew 7.5 percent in 1989, compared to a 10.2 percent growth in travel generated local tax revenue.

During 1989, each dollar of travel spending in the U.S. generated 7.5 cents in federal tax revenue, 3.8 cents in state tax revenue, and 2 cents in local taxes, for a total of 13.3 cents.

The Data Center estimates that total tax revenue generated by foreign visitor spending in the U.S. was approximately \$4.8 billion dollars for the year. All told, U.S. and foreign travelers in the fifty states and the District of Columbia generated \$41.2 billion in tax revenue for U.S. governments, 4 percent of total tax revenue collections in the country. These tax receipts are the product of the tax structures and travel spending patterns.

Table 12 shows estimates of tax receipts generated by U.S. travelers in each of the states and the District of Columbia, by level of government, for 1989.

California led all other states with a total of \$4.9 billion in travel-related tax collections. Florida was second with nearly \$3.0 billion, and New York was third with \$2.9 billion.

Table 12: 1989 U.S. Travel Generated Tax Receipts

\$1.0 = \$1 Million

State	TOTAL	Federal	State	Local
Alabama	\$ 303.5	\$ 144.2	\$ 110.8	\$ 48.5
Alaska	126.9	86.5	15.0	25.4
Arizona	569.5	272.5	212.9	84.1
Arkansas	212.1	91.4	103.4	17.3
California	4,871.8	2,801.8	1,169.5	900.5
Colorado	756.3	449.1	187.3	120.0
Connecticut	434.8	295.2	102.2	37.5
Delaware	94.1	66.6	19.7	7.8
Florida	2,979.1	1,536.2	969.4	473.6
Georgia	1,063.0	620.5	275.3	167.2
Hawaii	626.6	357.8	225.6	43.2
Idaho	142.9	65.1	69.0	8.8
Illinois	1,699.1	1,057.4	421.1	220.5
Indiana	419.8	208.8	155.7	55.2
Iowa	259.3	115.2	119.1	25.0
Kansas	222.0	115.6	81.9	24.5
Kentucky	324.7	164.1	129.3	31.3
Louisiana	480.6	209.0	173.8	97.8
Maine	141.7	63.9	59.7	18.0
Maryland	633.5	347.3	182.8	103.5
Massachusetts	815.8	533.2	178.1	104.6
Michigan	882.0	525.8	267.7	88.5
Minnesota	697.3	432.8	184.5	80.0
Mississippi	181.5	68.1	88.9	24.4
Missouri	852.0	550.5	218.6	83.0
Montana	114.6	57.9	43.1	13.6
Nebraska	178.8	86.3	67.8	24.7

Table 12: 1989 U.S. Travel Generated Tax Receipts (Continued)

\$1.0 = \$1 Million

State	TOTAL	Federal	State	Local
Nevada	\$ 1,140.5	\$ 687.5	\$ 194.8	\$ 258.3
New Hampshire	108.0	63.1	28.6	16.3
New Jersey	1,281.6	754.8	397.5	129.3
New Mexico	219.0	96.5	93.8	28.8
New York	2,918.9	1,678.5	636.7	603.7
North Carolina	849.7	478.3	233.4	138.0
North Dakota	67.5	30.5	30.9	6.1
Ohio	903.3	517.4	279.4	106.5
Oklahoma	456.8	211.0	189.9	55.9
Oregon	300.2	196.1	49.9	54.2
Pennsylvania	1,091.9	660.5	332.7	98.7
Rhode Island	85.9	53.5	23.0	9.4
South Carolina	506.6	214.7	219.5	72.4
South Dakota	69.9	29.6	30.9	9.4
Tennessee	1,038.3	617.0	285.7	135.6
Texas	2,214.1	1,302.1	597.2	314.8
Utah	301.2	144.9	118.8	37.5
Vermont	95.8	44.0	37.6	14.1
Virginia	1,035.1	479.8	354.9	200.4
Washington	587.0	362.4	168.1	56.5
West Virginia	123.2	48.7	62.1	12.5
Wisconsin	433.4	218.0	170.3	45.1
Wyoming	92.6	45.6	27.3	19.6
Washington DC	358.4	213.1	0.0	145.2
TOTAL	\$ 36,362.3	\$ 20,470.5	\$ 10,395.2	\$ 5,496.6

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Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

1989 MULTIPLIER IMPACT OF TRAVEL SPENDING IN THE U.S.

Travelers in the U.S. produce "secondary" impacts over and above that of their original expenditures. These secondary outputs (sales) and earnings (wage and salary income) arise from "indirect" and "induced" spending.

Indirect impact occurs as travel industry business operators (such as restaurateurs) purchase goods (such as food and beverages) and services (such as electricity and building maintenance) from local suppliers. These purchases generate additional output or sales indirectly.

Those supplying the restaurateur must, in turn, purchase goods and services from their suppliers. This chain of buying and selling continues in the area until the initial traveler purchase completely "leaks" out of the area through taxes, purchases from outside the area (imports), business savings, and payments to employees. However, during the process of buying and selling within that area, output is generated beyond that from the initial traveler spending.

The other type of secondary impact is the induced effect on sales or output. This results as the employees of businesses and their suppliers spend part of their earnings in the area. This spending itself generates sales additional to the indirect impact.

The sum of the indirect and induced effects comprises the total secondary impact of traveler expenditures in the area. The ratio of the sum of primary output generated (traveler spending less taxes) plus secondary output to initial expenditures alone is commonly termed the sales or output "multiplier".

During the secondary impact process, wage and salary incomes (earnings) are generated additional to that produced by the initial travel expenditures as the suppliers employ labor to produce the additional output. The "earnings multiplier" is the ratio of the total primary and secondary earnings generated by the initial visitor spending to that spending. Just as additional earnings are created, employment is also generated during the secondary impact process. The "employment multiplier" represents the number of jobs provided, directly and indirectly, for each one billion dollars of output or expenditures generated.

Deriving acceptable output and earnings multipliers for the U.S., a state, or a local region is normally quite expensive. However, the Bureau of Economic Analysis of the U.S. Department of Commerce can provide national and regional multiplier data at a reasonable cost from its Regional Input-Output Modeling System (RIMS II).

Table 13 summarizes the direct, indirect and induced effects of traveler spending on the U.S. economy in 1989. The \$272 billion spent by Americans in the U.S. on travel away from home generated a total output of \$632.4 billion in expenditures. The ratio of total expenditures output to the initial spending is 2.32, the output multiplier. The ratio of total earnings generated to the initial spending is 0.69, the earnings multiplier. The employment multiplier, the ratio of the total number of jobs per billion dollars of output, is 39.6.

This indicates the average traveler dollar generated an additional \$1.32 in secondary expenditures for a total impact of \$2.32. In addition, each dollar of expenditures generated 69 cents in earnings to the economy. Furthermore, every one billion dollars of travel expenditures produced an additional 39.6 jobs.

Table 13: 1989 Summary of the Impact of Travelers on the U.S.

Impact Measure	Direct Impact	Indirect & Induced Impact	Total Impact
Expenditures (Billions)	\$ 272.0	\$ 360.4	\$ 632.4
Earnings (Billions)	\$ 69.7	\$ 116.7	\$ 186.5
Employment (Millions)	4.9	5.8	10.7

Source: U.S. Travel Data Center, U.S. Bureau of Economic Analysis, Department of Commerce
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Table 13 also indicates that in addition to the \$69.7 billion in payroll income or earnings generated directly by traveler spending, \$116.7 billion was produced in secondary impact. Overall, travel spending generated employment for 10.7 million residents whose earnings exceeded \$186.5 billion.

APPENDICES

Appendix A: Impact of Travel on State Economies 1988 and 1987

Table 14: 1988 U.S. Domestic Travel Expenditures by State

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail
Alabama	\$ 2,792.5	\$ 576.6	\$ 668.4	\$ 352.5	\$ 733.5	\$ 186.4	\$ 275.1
Alaska	936.6	254.4	150.0	159.9	228.9	56.2	87.3
Arizona	3,953.6	992.2	739.4	798.0	933.7	192.5	297.9
Arkansas	1,991.7	303.1	599.2	238.7	527.7	128.6	194.3
California	38,143.2	10,489.4	7,759.8	5,892.5	8,513.6	2,634.4	2,853.5
Colorado	4,627.2	1,137.0	1,281.9	750.8	845.6	341.1	271.0
Connecticut	2,924.4	1,384.4	383.6	388.2	472.2	127.9	168.1
Delaware	745.0	226.2	144.5	112.7	164.2	38.7	58.7
Florida	22,354.8	4,272.5	2,565.7	4,777.6	6,015.9	2,486.4	2,236.6
Georgia	6,492.6	1,312.7	1,085.8	1,149.4	1,796.4	475.9	672.4
Hawaii	5,240.3	1,340.6	218.8	1,601.8	1,397.1	264.3	417.7
Idaho	1,142.3	241.8	533.9	96.8	160.2	56.8	52.8
Illinois	9,981.6	3,183.5	2,132.6	1,498.6	2,053.2	484.3	629.3
Indiana	3,216.0	697.6	848.2	448.4	759.7	201.0	261.2
Iowa	2,154.6	318.6	862.9	228.2	447.7	125.9	171.4
Kansas	2,042.0	542.8	612.8	198.0	424.0	105.0	159.5
Kentucky	2,675.3	484.7	617.7	379.0	732.7	187.0	274.2
Louisiana	3,972.6	610.8	974.1	720.5	1,043.0	243.6	380.6
Maine	1,297.0	268.3	273.3	237.3	307.3	92.6	118.1
Maryland	4,008.3	934.7	853.9	675.9	991.1	222.2	330.5
Massachusetts	6,468.0	2,803.5	787.5	1,156.6	1,060.0	267.9	392.4
Michigan	6,003.2	1,596.2	1,572.6	828.1	1,249.7	350.2	406.4
Minnesota	3,270.0	808.0	688.6	458.4	802.0	237.1	275.9
Mississippi	1,623.1	331.8	364.8	205.2	445.5	112.3	163.5
Missouri	4,942.4	1,365.6	1,287.6	580.3	1,045.3	308.9	354.7
Montana	1,120.7	213.7	477.1	119.9	185.6	56.6	68.0
Nebraska	1,381.6	231.8	446.3	155.5	339.2	84.5	124.4

Nevada	9,126.7	787.8	716.7	1,229.6	1,929.3	3,914.4	549.0
New Hampshire	1,144.2	355.0	161.1	197.4	228.9	115.9	86.0
New Jersey	9,119.3	2,741.6	854.3	1,084.1	1,298.4	2,671.9	469.0
New Mexico	1,860.1	385.4	581.4	264.2	398.9	104.9	125.3
New York	17,150.3	5,750.5	2,601.0	3,282.8	3,415.4	917.0	1,183.6
North Carolina	5,843.7	922.2	951.7	1,001.6	1,802.9	487.8	677.5
North Dakota	630.5	94.8	198.7	72.0	168.7	37.8	58.5
Ohio	6,661.8	1,693.6	1,718.7	868.6	1,430.7	481.4	468.9
Oklahoma	2,262.5	403.3	728.5	248.0	537.5	138.2	207.0
Oregon	3,225.6	909.6	597.4	439.8	767.5	205.6	305.7
Pennsylvania	8,290.7	2,408.9	1,932.1	1,198.4	1,661.0	471.5	618.8
Rhode Island	586.2	220.5	121.9	91.7	89.8	29.3	33.0
South Carolina	3,660.1	461.3	706.2	820.1	1,021.0	260.4	391.1
South Dakota	604.5	60.7	212.0	76.2	156.6	40.5	58.5
Tennessee	5,094.5	804.4	894.2	949.8	1,453.6	450.5	542.0
Texas	14,498.2	3,598.6	2,639.8	2,120.5	3,748.6	996.2	1,394.5
Utah	2,016.5	508.8	645.0	252.9	361.6	130.2	118.0
Vermont	933.8	142.1	108.8	205.1	247.9	137.3	92.7
Virginia	7,570.3	1,309.9	1,375.3	1,528.4	2,004.0	648.6	704.0
Washington	4,312.5	1,315.6	829.2	569.9	995.0	246.9	355.8
West Virginia	1,075.9	154.4	304.7	164.6	265.6	84.0	102.6
Wisconsin	3,396.8	760.8	757.8	486.3	858.5	246.1	287.3
Wyoming	929.7	227.0	234.3	137.0	209.0	50.8	71.7
Washington DC	2,465.6	629.9	259.1	552.0	671.0	137.5	216.1
TOTAL	\$257,960.5	\$ 63,569.2	\$ 49,060.7	\$ 42,049.6	\$ 59,396.2	\$ 23,072.9	\$ 20,811.9

Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

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Table 15: 1988 State Domestic Travel Generated Business Receipts

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail
Alabama	\$ 2,496.0	\$ 365.4	\$ 658.7	\$ 334.8	\$ 699.5	\$ 176.9	\$ 260.7
Alaska	1,078.9	400.5	149.7	159.1	227.3	56.0	86.3
Arizona	3,650.0	837.3	729.1	738.4	882.5	181.7	281.0
Arkansas	1,802.9	190.5	584.2	228.3	491.2	122.5	186.1
California	34,782.2	8,331.8	7,419.8	5,495.9	8,205.9	2,627.9	2,701.0
Colorado	4,947.5	1,559.6	1,267.0	715.7	812.7	334.8	257.7
Connecticut	2,013.1	550.2	366.2	362.2	450.3	127.9	156.3
Delaware	594.5	82.4	143.1	107.4	164.2	38.7	58.7
Florida	21,094.8	3,904.6	2,503.9	4,421.7	5,805.9	2,347.5	2,111.1
Georgia	8,301.7	3,300.9	1,059.0	1,101.3	1,732.6	462.0	645.9
Hawaii	4,540.9	792.2	209.4	1,540.2	1,343.4	254.1	401.7
Idaho	1,006.5	131.1	527.6	90.8	152.6	54.1	50.3
Illinois	10,159.9	3,689.2	2,026.2	1,398.5	1,968.9	484.3	592.8
Indiana	2,914.1	503.6	804.6	420.6	735.5	201.0	248.8
Iowa	1,941.0	153.5	851.1	214.0	436.6	121.0	164.8
Kansas	1,753.4	303.9	602.1	189.9	405.1	100.5	151.9
Kentucky	2,787.5	669.7	603.2	362.1	713.2	178.1	261.1
Louisiana	3,726.5	544.6	934.6	675.3	987.1	228.3	356.7
Maine	1,126.9	135.5	266.3	222.1	297.9	92.6	112.5
Maryland	3,485.4	547.1	829.9	625.5	959.9	208.2	314.7
Massachusetts	5,214.2	1,652.3	782.5	1,077.8	1,060.0	267.9	373.7
Michigan	5,666.5	1,402.9	1,522.3	797.3	1,216.5	336.7	390.7
Minnesota	4,101.0	1,758.5	668.7	424.2	767.2	222.1	260.3
Mississippi	1,485.5	261.8	351.1	192.1	420.3	105.9	154.2
Missouri	5,246.3	1,815.3	1,258.5	548.7	995.2	292.1	336.5
Montana	1,030.6	127.4	477.1	116.1	185.6	56.6	68.0
Nebraska	1,230.6	119.6	436.9	146.0	329.4	79.8	118.9

Nevada	8,342.2	305.6	711.5	1,203.8	1,823.9	3,778.3	519.0
New Hampshire	902.9	134.6	161.1	186.2	219.2	115.9	86.0
New Jersey	8,060.2	1,985.8	831.5	1,026.9	1,252.8	2,520.7	442.4
New Mexico	1,614.4	197.4	574.6	246.0	378.4	99.4	118.6
New York	16,467.4	5,647.2	2,489.3	3,078.8	3,283.4	857.0	1,111.7
North Carolina	6,189.9	1,415.5	937.7	965.8	1,737.8	482.9	650.1
North Dakota	583.1	66.8	194.6	67.9	162.7	35.8	55.4
Ohio	5,831.0	1,032.8	1,670.6	821.5	1,379.9	481.4	444.7
Oklahoma	2,758.3	985.1	704.2	233.5	510.4	130.1	194.9
Oregon	2,718.8	413.6	597.4	428.9	767.5	205.6	305.7
Pennsylvania	7,454.5	1,775.4	1,884.8	1,134.3	1,604.6	471.5	583.8
Rhode Island	437.1	86.8	116.7	86.7	86.4	29.3	31.1
South Carolina	3,321.6	285.1	691.3	753.0	971.0	249.7	371.5
South Dakota	567.4	42.3	208.8	72.7	149.2	38.8	55.5
Tennessee	5,866.0	1,826.2	870.5	883.2	1,363.2	418.9	504.0
Texas	15,341.4	4,960.9	2,548.0	1,983.4	3,603.0	939.8	1,306.2
Utah	2,010.3	569.2	634.4	235.6	339.2	121.7	110.2
Vermont	802.4	41.9	106.8	193.9	238.7	132.0	89.1
Virginia	8,105.0	2,122.5	1,347.7	1,428.4	1,898.7	640.4	667.3
Washington	4,058.9	1,214.9	799.1	527.8	946.7	240.9	329.4
West Virginia	975.1	99.6	291.7	155.9	251.2	79.6	97.1
Wisconsin	2,838.1	296.9	739.4	463.1	830.7	234.4	273.6
Wyoming	815.9	133.2	232.1	131.7	201.1	49.0	68.8
Washington DC	2,029.8	305.0	252.3	501.8	637.1	129.7	203.8
TOTAL	\$246,270.0	\$ 60,075.6	\$ 47,629.1	\$ 39,517.2	\$ 57,083.3	\$ 22,242.0	\$ 19,722.8

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Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

Table 16: 1988 U.S. Domestic Travel Generated Payroll by State

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail	Travel Planning
Alabama	\$ 461.5	\$ 75.1	\$ 46.4	\$ 78.6	\$ 140.8	\$ 66.0	\$ 37.4	\$ 17.2
Alaska	318.9	164.2	14.9	42.4	51.6	18.6	10.9	16.2
Arizona	961.1	313.6	53.6	208.9	232.3	72.7	40.8	39.2
Arkansas	313.3	43.0	33.7	49.5	103.3	46.5	30.3	7.0
California	9,337.1	3,042.8	612.4	1,548.2	2,056.6	1,107.4	430.0	539.6
Colorado	1,413.9	643.1	97.8	201.1	225.8	140.9	37.2	68.1
Connecticut	595.6	158.9	35.1	120.1	119.1	64.2	28.1	70.2
Delaware	145.5	42.9	8.2	26.1	36.7	15.0	7.5	9.0
Florida	5,522.1	1,432.6	184.4	1,128.4	1,352.8	887.0	327.0	209.9
Georgia	2,584.3	1,402.0	84.2	279.2	406.6	214.7	109.5	88.2
Hawaii	1,345.7	297.4	28.4	445.4	315.7	125.8	61.0	72.1
Idaho	159.6	29.4	35.6	22.1	37.9	21.1	6.7	6.7
Illinois	3,093.5	1,524.0	167.0	374.0	488.5	202.6	105.9	231.6
Indiana	687.1	205.3	58.1	107.9	168.2	82.4	37.2	27.9
Iowa	331.4	35.4	65.1	56.4	93.9	42.3	24.3	14.2
Kansas	334.8	50.4	50.8	45.7	96.3	44.4	23.2	24.0
Kentucky	655.2	240.2	46.4	92.9	155.6	72.4	33.7	13.9
Louisiana	785.6	178.5	68.5	165.6	220.1	79.9	52.6	20.5
Maine	223.7	31.7	17.0	52.3	70.3	29.5	16.6	6.1
Maryland	905.0	197.9	69.8	175.1	265.5	94.1	52.3	50.3
Massachusetts	1,487.6	470.9	70.7	301.8	272.9	125.0	62.3	184.0
Michigan	1,369.0	510.7	114.7	205.7	271.7	128.6	58.2	79.4
Minnesota	1,293.8	730.7	60.3	110.1	182.0	103.3	42.6	64.8
Mississippi	298.1	63.7	27.3	53.4	84.1	41.7	21.9	6.1
Missouri	1,481.3	695.9	94.4	149.1	242.3	146.3	54.8	98.4
Montana	173.8	33.4	37.5	29.6	42.2	16.4	10.0	4.6
Nebraska	229.4	30.9	35.7	33.5	72.8	27.2	17.2	12.1

Nevada	2,833.9	110.7	127.6	375.4	478.9	1,625.1	96.0	19.2
New Hampshire	202.9	24.0	13.0	55.1	53.2	34.3	11.1	12.0
New Jersey	2,392.2	567.2	70.5	286.7	294.6	953.1	71.6	148.4
New Mexico	310.2	52.8	39.8	62.2	98.3	32.2	15.3	9.7
New York	5,010.3	2,149.9	217.6	913.5	799.6	402.0	179.8	348.0
North Carolina	1,616.6	582.4	60.4	244.3	386.8	198.7	107.9	36.2
North Dakota	99.9	14.6	13.9	15.3	33.4	13.3	6.6	2.8
Ohio	1,353.3	329.2	122.2	215.6	329.9	200.0	77.7	78.7
Oklahoma	752.0	406.8	86.4	58.5	111.2	43.3	29.6	16.2
Oregon	603.8	116.9	48.9	110.0	173.5	85.0	41.3	28.1
Pennsylvania	1,810.7	618.7	137.7	310.1	334.3	203.5	84.8	121.6
Rhode Island	159.2	27.8	9.7	73.5	21.2	10.7	5.1	11.2
South Carolina	707.8	91.8	44.3	183.0	211.9	101.4	59.3	16.0
South Dakota	105.2	12.0	15.4	21.3	31.4	14.7	7.0	3.4
Tennessee	1,595.2	737.2	56.6	227.9	305.6	141.0	86.0	40.8
Texas	4,372.4	1,993.5	192.9	533.1	863.4	393.3	210.5	185.7
Utah	495.6	214.6	46.8	60.0	84.1	53.8	17.6	18.6
Vermont	162.7	13.1	8.5	53.6	53.2	15.2	13.2	5.8
Virginia	2,229.7	858.4	111.3	363.7	428.0	284.1	111.0	73.2
Washington	1,126.9	492.3	59.3	144.8	208.0	101.5	47.9	73.2
West Virginia	176.0	20.5	21.6	41.3	49.8	26.5	13.0	3.3
Wisconsin	625.8	92.5	53.4	123.1	174.6	102.3	37.6	42.3
Wyoming	156.5	19.5	23.3	31.8	51.3	17.3	10.5	2.9
Washington DC	560.9	107.2	22.0	158.2	170.9	34.8	36.3	31.5
TOTAL	\$ 65,967.9	\$ 22,298.3	\$ 3,821.7	\$ 10,766.1	\$ 13,552.5	\$ 9,103.2	\$ 3,116.1	\$ 3,310.1

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Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

Table 17: 1988 State Domestic Travel Generated Employment

1.0 = 1 Thousand Jobs

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail	Travel Planning
Alabama	47.6	4.4	3.4	10.1	18.6	6.7	3.4	1.0
Alaska	18.3	5.7	0.9	4.0	4.3	1.8	0.7	0.9
Arizona	84.9	13.8	3.8	23.7	31.5	6.1	3.3	2.8
Arkansas	36.5	2.5	2.6	7.7	15.3	5.4	2.5	0.6
California	608.2	95.4	38.7	143.9	216.0	54.9	30.3	29.1
Colorado	97.6	21.4	6.8	22.6	29.1	10.5	3.2	3.9
Connecticut	39.5	6.3	1.7	9.9	11.6	4.4	1.8	3.6
Delaware	12.1	2.0	0.6	2.5	4.6	1.4	0.7	0.5
Florida	426.4	49.7	12.1	109.2	153.9	62.7	26.2	12.6
Georgia	151.1	36.9	5.0	29.3	49.6	17.2	8.7	4.4
Hawaii	92.2	10.9	1.8	29.0	31.5	10.4	4.3	4.3
Idaho	18.1	1.2	3.4	3.3	6.0	3.0	0.6	0.5
Illinois	187.7	47.3	9.6	34.4	60.9	15.7	7.8	11.9
Indiana	65.9	9.6	4.1	14.8	24.3	7.9	3.3	1.9
Iowa	41.3	2.2	5.9	8.0	15.9	5.9	2.4	1.0
Kansas	36.3	3.9	3.9	5.9	13.5	5.4	2.2	1.6
Kentucky	60.8	11.5	3.5	12.8	21.2	7.4	3.3	1.0
Louisiana	70.5	7.3	4.6	17.5	28.2	6.9	4.7	1.4
Maine	23.3	1.9	1.3	6.1	9.2	3.0	1.4	0.4
Maryland	71.0	8.4	4.3	16.8	27.3	7.0	4.3	2.8
Massachusetts	96.2	18.0	3.6	25.7	27.9	8.4	4.5	8.1
Michigan	105.6	17.8	7.0	24.4	36.2	10.3	4.9	5.0
Minnesota	78.6	19.9	3.8	13.5	25.7	8.4	3.4	3.9
Mississippi	32.4	3.9	2.0	6.5	12.5	5.0	2.1	0.4
Missouri	101.1	21.5	7.3	16.8	34.2	12.0	4.6	4.8
Montana	19.5	1.8	3.5	3.9	6.8	2.0	1.0	0.4
Nebraska	28.0	1.7	3.0	5.1	11.8	3.7	1.7	0.8

Nevada	195.8	5.0	8.6	22.6	55.5	95.7	6.9	1.4
New Hampshire	19.2	1.4	0.7	5.9	6.4	3.1	0.9	0.8
New Jersey	146.9	22.9	3.9	16.1	28.3	63.6	5.0	7.1
New Mexico	33.8	2.6	3.3	8.1	14.1	3.5	1.4	0.8
New York	274.2	64.7	12.5	67.3	79.9	20.4	12.4	17.0
North Carolina	131.9	19.2	3.8	26.3	52.0	18.8	9.6	2.2
North Dakota	13.3	0.9	1.2	2.4	5.7	2.2	0.7	0.2
Ohio	123.3	15.0	8.6	25.2	45.5	17.2	6.7	5.1
Oklahoma	48.2	12.7	4.7	7.4	14.8	4.8	2.8	1.1
Oregon	60.0	5.3	4.1	14.3	23.2	8.1	3.2	1.9
Pennsylvania	140.1	23.6	9.9	32.8	43.2	16.2	7.1	7.3
Rhode Island	9.0	1.2	0.5	2.3	2.6	1.0	0.4	1.0
South Carolina	76.0	4.4	3.3	22.6	28.8	10.2	5.7	1.0
South Dakota	13.3	0.7	1.2	2.6	5.5	2.3	0.8	0.2
Tennessee	118.3	26.3	4.1	28.4	38.1	11.4	7.6	2.4
Texas	297.5	66.7	11.8	59.4	101.3	31.6	16.7	10.1
Utah	39.7	6.4	4.1	6.9	13.7	5.7	1.7	1.3
Vermont	18.4	0.7	0.7	7.6	6.5	1.5	1.1	0.3
Virginia	161.6	25.1	7.3	38.2	52.5	25.4	9.5	3.8
Washington	79.4	15.0	4.3	15.6	27.0	9.1	3.7	4.7
West Virginia	18.5	0.7	1.7	4.5	7.2	3.0	1.3	0.2
Wisconsin	69.9	4.2	4.1	16.6	28.3	10.3	3.4	2.9
Wyoming	19.2	1.8	2.1	4.1	7.9	1.9	1.1	0.2
Washington DC	34.0	3.3	1.2	9.4	14.9	1.6	2.2	1.5
TOTAL	4,792.2	756.4	255.7	1,054.2	1,630.5	662.2	249.1	184.1

Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

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Table 18: 1987 U.S. Domestic Travel Expenditures by State

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail
Alabama	\$ 2,513.9	\$ 517.3	\$ 689.1	\$ 331.0	\$ 569.4	\$ 178.1	\$ 229.0
Alaska	878.6	223.2	141.8	152.5	231.1	54.1	75.9
Arizona	3,592.8	896.0	742.6	717.9	814.1	178.7	243.6
Arkansas	1,772.1	238.9	548.1	224.1	471.0	123.8	166.1
California	34,253.2	9,025.1	7,470.4	5,405.8	7,455.9	2,441.8	2,454.2
Colorado	4,319.6	1,019.2	1,301.6	694.4	766.2	313.2	225.0
Connecticut	2,659.2	1,156.1	307.7	387.0	492.2	139.9	176.2
Delaware	700.8	203.3	139.2	103.6	160.1	39.4	55.2
Florida	20,461.3	3,966.6	2,389.7	4,337.6	5,465.7	2,357.8	1,943.9
Georgia	5,925.0	1,199.3	1,013.9	1,049.9	1,622.1	457.8	582.0
Hawaii	4,684.3	1,161.4	214.5	1,423.8	1,236.4	267.2	381.0
Idaho	1,061.5	207.1	537.6	86.8	138.1	49.9	42.1
Illinois	8,843.0	2,857.8	1,834.6	1,386.2	1,809.7	452.9	501.9
Indiana	2,919.1	663.7	732.1	428.4	687.9	193.2	213.9
Iowa	2,015.9	302.9	776.7	213.5	446.8	125.9	150.1
Kansas	1,840.1	456.2	564.7	185.5	398.2	101.7	133.8
Kentucky	2,506.9	454.2	636.0	355.9	653.1	178.9	228.8
Louisiana	3,527.8	536.6	871.7	629.8	927.6	232.1	330.0
Maine	1,237.5	317.8	223.6	204.3	284.6	94.2	112.9
Maryland	3,692.9	860.9	804.5	618.9	898.8	218.5	291.3
Massachusetts	5,783.5	2,240.0	639.9	1,106.0	1,097.1	294.8	405.7
Michigan	5,333.1	1,404.9	1,366.5	767.2	1,109.7	329.9	355.0
Minnesota	3,121.1	783.7	661.6	425.1	782.2	231.1	237.4
Mississippi	1,548.7	316.1	379.8	198.1	410.7	107.5	136.6
Missouri	4,734.6	1,334.4	1,201.6	543.2	1,039.5	303.4	312.4
Montana	1,060.0	190.1	483.8	108.5	169.2	52.5	55.9
Nebraska	1,298.8	220.9	407.3	144.4	331.9	85.3	109.1

Nevada	8,430.4	762.3	728.9	1,137.1	1,724.8	3,616.2	461.1
New Hampshire	1,064.8	297.4	133.8	193.5	231.9	119.0	89.2
New Jersey	8,284.4	2,523.1	759.9	1,017.3	1,134.8	2,446.6	402.7
New Mexico	1,756.0	348.7	587.4	246.9	371.8	97.8	103.4
New York	16,038.4	5,502.1	2,289.7	3,240.6	3,064.9	889.4	1,051.8
North Carolina	5,440.3	843.9	885.4	943.7	1,679.0	482.7	605.7
North Dakota	592.6	86.4	183.2	67.4	167.6	37.6	50.3
Ohio	5,918.4	1,553.2	1,476.1	796.7	1,270.5	449.3	372.5
Oklahoma	2,038.9	365.8	652.2	232.2	477.7	133.4	177.6
Oregon	2,878.5	784.4	568.0	392.1	676.1	195.5	262.5
Pennsylvania	7,513.7	2,219.3	1,704.8	1,058.3	1,452.0	545.8	533.5
Rhode Island	505.7	192.7	96.7	76.2	81.1	28.4	30.6
South Carolina	3,239.6	408.2	650.7	643.0	935.6	253.0	349.0
South Dakota	591.0	56.3	196.2	72.0	168.5	43.3	54.8
Tennessee	4,742.6	786.9	932.8	789.3	1,328.1	425.5	480.0
Texas	13,161.8	3,265.7	2,553.1	1,909.6	3,305.5	944.2	1,183.6
Utah	1,870.2	450.8	653.5	227.4	321.4	120.7	96.5
Vermont	881.0	123.6	88.5	188.2	241.7	147.7	91.3
Virginia	6,683.0	1,172.5	1,268.7	1,285.4	1,800.1	530.9	625.5
Washington	3,869.1	1,186.1	783.1	517.1	855.4	227.1	300.4
West Virginia	966.1	108.4	285.6	153.1	248.8	80.7	89.6
Wisconsin	3,042.4	690.9	649.6	463.9	775.2	232.7	230.2
Wyoming	862.4	198.9	239.6	130.8	186.9	47.4	58.8
Washington DC	2,247.3	563.6	249.0	495.0	625.6	130.8	183.1
TOTAL	\$234,904.0	\$ 57,244.8	\$ 45,696.9	\$ 38,506.2	\$ 53,594.3	\$ 21,829.0	\$ 18,032.7

Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

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Table 19: 1987 State Domestic Travel Generated Business Receipts

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail
Alabama	\$ 2,241.5	\$ 317.3	\$ 680.5	\$ 314.4	\$ 543.5	\$ 168.9	\$ 217.0
Alaska	1,010.5	358.9	141.6	151.8	229.4	53.8	75.1
Arizona	3,253.8	685.6	732.7	667.7	769.4	168.7	229.7
Arkansas	1,598.5	134.4	534.7	214.3	438.1	117.9	159.1
California	31,404.9	7,273.4	7,142.9	5,043.0	7,186.9	2,435.7	2,323.0
Colorado	4,613.7	1,407.8	1,286.6	662.0	735.9	307.4	214.0
Connecticut	1,862.1	433.9	293.7	361.2	469.4	139.9	163.9
Delaware	555.0	63.7	137.7	98.9	160.1	39.4	55.2
Florida	19,577.6	3,819.7	2,338.5	4,049.5	5,273.5	2,245.6	1,850.8
Georgia	7,632.5	3,069.8	988.6	1,006.1	1,564.4	444.4	559.1
Hawaii	4,051.0	664.6	205.2	1,369.0	1,188.8	256.9	366.4
Idaho	932.5	100.5	531.5	81.4	131.5	47.5	40.1
Illinois	8,906.1	3,211.1	1,741.2	1,293.6	1,734.5	452.9	472.8
Indiana	2,619.0	462.0	692.7	401.8	665.6	193.2	203.7
Iowa	1,800.7	135.7	764.1	200.2	435.3	121.0	144.3
Kansas	1,550.1	214.0	553.1	178.0	380.4	97.3	127.4
Kentucky	2,545.7	560.6	621.0	340.4	635.6	170.4	217.9
Louisiana	3,322.5	489.7	838.1	590.2	877.6	217.6	309.3
Maine	1,085.4	198.6	217.7	191.2	276.1	94.2	107.5
Maryland	3,156.1	449.3	780.9	573.2	870.6	204.7	277.4
Massachusetts	4,727.4	1,283.7	634.8	1,030.6	1,097.1	294.8	386.4
Michigan	4,933.7	1,134.9	1,321.8	738.6	1,079.8	317.2	341.3
Minnesota	3,723.0	1,502.3	639.6	393.4	747.2	216.5	223.9
Mississippi	1,394.5	225.9	365.4	185.5	387.4	101.4	128.9
Missouri	4,872.6	1,616.8	1,169.4	513.7	989.5	286.8	296.4
Montana	973.7	105.5	483.8	106.7	169.2	52.5	55.9
Nebraska	1,142.5	103.0	397.0	135.6	322.1	80.4	104.4

Nevada	7,666.1	272.6	723.6	1,112.8	1,630.6	3,490.5	435.9
New Hampshire	846.3	99.5	133.8	182.6	222.2	119.0	89.2
New Jersey	7,252.0	1,766.4	737.7	964.1	1,095.8	2,308.1	379.9
New Mexico	1,523.4	169.5	580.7	229.9	352.7	92.6	98.0
New York	15,116.6	5,121.4	2,186.7	3,039.9	2,949.4	831.2	987.9
North Carolina	5,531.3	1,071.4	872.0	910.4	1,618.4	477.9	581.2
North Dakota	539.7	52.2	179.0	63.7	161.3	35.8	47.7
Ohio	5,137.2	924.0	1,432.3	753.6	1,224.7	449.3	353.3
Oklahoma	2,463.9	865.7	630.8	219.4	454.2	126.0	167.9
Oregon	2,402.5	318.0	568.0	382.4	676.1	195.5	262.5
Pennsylvania	6,623.4	1,509.4	1,658.6	1,002.3	1,404.0	545.8	503.3
Rhode Island	376.3	76.2	92.6	72.1	78.2	28.4	28.9
South Carolina	2,905.2	214.2	636.6	590.5	889.7	242.7	331.6
South Dakota	547.1	32.8	192.6	68.4	160.2	41.3	51.7
Tennessee	5,301.1	1,571.0	909.0	734.0	1,245.1	395.7	446.3
Texas	13,700.3	4,235.3	2,459.3	1,817.0	3,175.1	897.1	1,116.5
Utah	1,791.1	431.4	643.0	212.1	301.5	112.9	90.3
Vermont	761.0	33.6	86.8	177.9	232.9	142.1	87.8
Virginia	7,077.5	1,810.9	1,242.7	1,201.6	1,705.3	524.2	592.9
Washington	3,615.3	1,066.6	756.1	478.9	814.0	221.5	278.1
West Virginia	875.2	58.0	274.0	145.8	235.2	76.8	85.4
Wisconsin	2,509.3	244.2	632.9	441.8	749.5	221.6	219.2
Wyoming	753.5	108.4	237.3	125.8	179.8	45.7	56.5
Washington DC	1,806.7	226.1	242.2	450.0	592.1	123.4	172.8
TOTAL	\$222,608.6	\$ 52,301.3	\$ 44,343.3	\$ 36,269.1	\$ 51,507.1	\$ 21,072.3	\$ 17,115.4

Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

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Table 20: 1987 U.S. Domestic Travel Generated Payroll by State

\$1.0 = \$1 Million

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail	Travel Planning
Alabama	\$ 400.4	\$ 73.6	\$ 43.3	\$ 76.4	\$ 103.0	\$ 58.5	\$ 30.6	\$ 15.1
Alaska	305.9	156.6	13.3	40.5	54.7	16.6	10.1	14.2
Arizona	843.0	270.6	50.5	181.7	205.2	62.6	36.5	35.8
Arkansas	282.5	38.1	26.1	48.9	93.5	41.5	28.0	6.3
California	8,389.5	2,886.4	550.2	1,343.3	1,800.5	952.0	365.6	491.6
Colorado	1,302.3	614.6	94.0	193.0	204.9	119.9	30.8	45.0
Connecticut	560.8	154.7	24.8	103.8	122.5	65.1	26.9	63.0
Delaware	138.1	43.7	7.0	23.4	35.6	14.2	7.0	7.2
Florida	5,175.3	1,515.8	161.7	1,016.6	1,238.6	786.9	273.1	182.6
Georgia	2,445.2	1,394.9	69.5	260.1	367.1	191.5	93.1	69.1
Hawaii	1,177.2	271.1	32.1	367.4	273.0	118.0	50.6	65.0
Idaho	139.1	24.1	33.7	20.5	32.0	17.2	5.6	6.1
Illinois	2,826.6	1,430.8	128.8	334.6	435.3	175.7	84.2	237.1
Indiana	623.0	196.2	43.7	103.2	153.1	73.5	28.4	24.9
Iowa	305.3	34.9	53.0	50.9	95.0	39.2	19.7	12.6
Kansas	301.3	44.2	43.1	41.9	91.2	39.9	19.2	21.9
Kentucky	586.9	209.0	43.4	90.2	139.7	64.2	28.1	12.1
Louisiana	730.8	178.4	53.8	164.1	199.7	70.6	45.6	18.6
Maine	202.8	33.2	12.9	46.8	63.3	27.9	13.5	5.1
Maryland	817.1	182.3	61.6	155.4	238.8	85.8	44.4	48.8
Massachusetts	1,395.5	444.1	51.3	276.9	279.2	127.6	58.8	157.7
Michigan	1,215.1	450.4	88.3	192.6	243.6	112.3	49.2	78.7
Minnesota	1,194.8	665.1	52.2	108.4	180.7	93.4	35.9	59.1
Mississippi	268.9	52.7	24.4	52.0	78.4	37.0	18.9	5.6
Missouri	1,384.5	660.6	80.7	141.8	243.9	133.3	46.5	77.8
Montana	158.3	29.0	35.9	28.2	38.8	14.1	7.6	4.6
Nebraska	215.3	29.0	29.7	33.0	72.3	25.4	14.8	11.1

Nevada	2,468.7	106.7	135.6	318.7	426.1	1,392.4	71.9	17.4
New Hampshire	187.6	19.0	10.4	51.3	53.0	32.7	10.5	10.9
New Jersey	2,135.7	558.9	55.5	267.8	255.1	809.4	60.9	128.2
New Mexico	287.2	48.1	38.0	59.9	91.6	27.8	13.3	8.6
New York	4,669.1	2,087.6	174.4	861.9	709.0	361.6	157.7	317.0
North Carolina	1,422.0	465.1	50.2	219.7	360.4	182.4	97.7	46.3
North Dakota	92.7	11.9	11.9	14.7	33.8	12.3	5.6	2.5
Ohio	1,196.5	312.8	94.9	197.4	294.0	173.1	57.2	67.1
Oklahoma	700.2	380.7	81.2	57.5	100.6	38.9	25.7	15.7
Oregon	518.1	92.1	43.6	93.5	152.8	74.9	35.9	25.3
Pennsylvania	1,635.9	572.9	108.8	273.7	289.0	218.5	71.8	101.3
Rhode Island	94.8	27.3	6.4	18.6	18.7	9.6	4.1	10.1
South Carolina	604.3	73.4	37.1	142.5	193.9	91.4	52.4	13.7
South Dakota	97.4	9.9	13.0	15.5	34.5	14.6	6.8	3.2
Tennessee	1,398.0	659.0	54.1	182.9	278.4	123.6	69.0	31.0
Texas	3,983.8	1,817.1	172.5	521.9	774.1	348.2	180.5	169.6
Utah	422.4	167.7	45.0	58.2	75.4	33.3	14.3	15.7
Vermont	150.7	11.4	6.6	49.7	50.8	15.2	11.6	5.3
Virginia	1,948.2	792.3	97.6	302.7	386.9	215.7	95.7	57.3
Washington	1,015.9	444.6	49.7	134.2	180.3	86.5	39.2	81.2
West Virginia	159.4	17.3	18.3	39.2	47.0	23.7	11.3	2.7
Wisconsin	558.3	82.1	40.1	111.5	163.0	89.7	32.8	39.1
Wyoming	139.7	16.9	22.7	30.2	44.7	15.0	7.6	2.6
Washington DC	527.0	105.3	21.6	146.3	164.2	30.7	31.4	27.4
TOTAL	\$ 59,799.3	\$ 20,964.1	\$ 3,298.0	\$ 9,665.0	\$ 12,260.7	\$ 7,998.0	\$ 2,637.6	\$ 2,975.9

Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

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Table 21: 1987 State Domestic Travel Generated Employment

1.0 = 1 Thousand Jobs

State	Total	Public Transport	Auto Transport	Lodging	Food Service	Entertain & Recreation	General Retail	Travel Planning
Alabama	41.0	4.1	3.0	10.1	13.9	6.1	2.9	1.0
Alaska	18.0	5.6	0.8	3.9	4.7	1.5	0.6	0.9
Arizona	78.0	12.9	3.7	21.5	28.3	6.0	3.0	2.7
Arkansas	33.8	2.1	2.1	7.9	14.1	4.8	2.5	0.5
California	565.2	92.1	38.0	130.8	198.8	50.6	26.5	28.5
Colorado	91.3	20.3	6.7	22.2	27.2	9.2	2.7	2.9
Connecticut	40.0	6.5	1.3	9.1	13.0	4.7	1.9	3.5
Delaware	12.5	2.3	0.5	2.4	4.7	1.5	0.7	0.5
Florida	404.2	52.0	11.0	103.6	146.4	56.5	22.7	11.9
Georgia	143.0	36.9	4.2	28.7	46.4	15.2	7.7	3.8
Hawaii	86.2	10.8	2.0	25.9	29.6	9.8	3.8	4.2
Idaho	16.8	1.6	3.4	3.2	5.3	2.4	0.5	0.5
Illinois	175.0	45.1	7.7	32.8	54.8	14.0	6.3	14.3
Indiana	61.9	9.7	3.2	14.6	23.0	7.2	2.6	1.8
Iowa	40.3	2.1	4.9	7.7	16.7	5.9	2.0	0.9
Kansas	33.4	2.9	3.2	5.8	13.4	4.8	1.9	1.5
Kentucky	56.1	10.6	3.5	12.6	19.3	6.4	2.8	0.9
Louisiana	67.0	7.3	3.7	17.6	26.6	6.3	4.2	1.3
Maine	22.3	2.4	1.1	5.8	8.6	2.8	1.2	0.4
Maryland	67.8	8.1	4.0	15.8	26.3	6.9	3.8	2.9
Massachusetts	95.6	16.4	2.9	24.8	30.8	8.6	4.5	7.6
Michigan	99.1	16.8	5.5	24.0	33.8	9.7	4.2	5.0
Minnesota	78.9	19.5	3.5	13.5	27.0	8.7	3.0	3.6
Mississippi	30.1	3.1	1.8	6.7	11.8	4.4	1.8	0.4
Missouri	98.6	21.5	5.9	16.6	35.3	11.0	4.0	4.3
Montana	18.4	1.6	3.5	3.9	6.4	1.7	0.8	0.4
Nebraska	27.3	1.7	2.6	5.1	12.2	3.5	1.5	0.8

Nevada	174.5	4.9	5.2	20.4	51.9	85.5	5.2	1.3
New Hampshire	19.0	1.1	0.6	5.8	6.7	3.0	0.9	0.8
New Jersey	139.8	22.8	3.2	16.2	26.4	59.9	4.6	6.7
New Mexico	32.5	2.5	3.4	8.0	13.7	3.0	1.3	0.7
New York	263.4	64.3	10.1	67.0	74.6	19.1	11.3	17.0
North Carolina	122.9	15.7	3.2	24.7	50.6	17.3	8.9	2.5
North Dakota	12.8	0.8	1.0	2.4	6.0	1.9	0.6	0.2
Ohio	113.2	14.1	6.8	24.3	42.1	16.1	5.0	4.7
Oklahoma	45.8	12.9	4.7	7.3	13.6	3.9	2.4	1.1
Oregon	54.2	4.4	3.8	12.8	21.1	7.4	2.8	1.8
Pennsylvania	133.0	22.8	8.1	30.4	39.6	19.1	6.2	6.7
Rhode Island	7.9	1.3	0.3	2.0	2.4	0.9	0.3	0.6
South Carolina	67.2	3.6	2.9	18.0	27.4	9.1	5.2	0.9
South Dakota	13.5	0.6	1.1	2.5	6.3	2.2	0.7	0.2
Tennessee	106.6	24.2	4.1	23.3	36.4	10.3	6.2	2.0
Texas	276.0	61.2	10.6	59.8	91.8	27.9	14.7	9.9
Utah	37.6	6.6	4.1	6.7	12.8	5.0	1.4	1.2
Vermont	18.0	0.6	0.6	7.4	6.6	1.5	1.0	0.3
Virginia	146.5	23.9	6.6	33.7	50.4	20.2	8.4	3.3
Washington	73.2	14.5	3.8	14.8	24.2	7.8	3.1	5.1
West Virginia	17.8	0.9	1.5	4.4	7.0	2.7	1.1	0.2
Wisconsin	66.4	3.9	3.2	15.8	27.6	9.9	3.1	2.8
Wyoming	17.4	1.5	2.1	3.9	7.1	1.8	0.8	0.2
Washington DC	35.3	4.5	1.3	9.1	15.4	1.5	2.0	1.4
TOTAL	4,496.1	729.3	225.8	997.2	1,540.5	607.0	217.6	178.7

Note: Estimates based on travel 100 miles or more away from home or overnight trips with one or more nights in paid accommodations.

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Appendix B: Travel Economic Impact Model

TRAVEL ECONOMIC IMPACT MODEL

Introduction

The Travel Economic Impact Model (TEIM) was developed by the U.S. Travel Data Center to provide annual estimates of the impact of the travel activity of U.S. residents on national, state and county economies in this country. It is a disaggregated model built upon estimates of 15 travel expenditure categories, their impact on 14 types of travel-related businesses at the retail level, and the resulting business receipts, employment, personal income, and tax receipts.

The TEIM has the capability of estimating the economic impact of various types of travel, such as business and vacation, by transport mode and type of accommodations used, and other trip and traveler characteristics.

The revised TEIM has been used to develop estimates of 1987 and subsequent year travel expenditures and the effect of these expenditures on employment, payroll and tax revenue in each of the 50 states and the District of Columbia. The Data Center is also planning to publish a time series of estimates for the years 1977-87 produced by the revised TEIM. The County Impact Component of the TEIM allows estimates of the economic impact of travel at the county and city level.

The estimates of economic impact contained herein were developed through a computer program designed by the Alexandria Design and Development Co., Inc. and operated by staff on Data Center's personal computers.

Definition of Terms

There is no commonly accepted definition of travel in use at this time. For the purposes of the estimates herein, "travel" is defined as activities associated with all overnight trips away from home in paid accommodations, and day trips to places 100 miles or more away from the traveler's origin. The TEIM definition includes all overnight trips regardless of distance away from home, but excludes day trips to places less than 100 miles away from home.

The word "tourism" is avoided in this report because of its vague meaning. Some define tourism as all travel away from home while others use the dictionary definition which limits tourism to personal or pleasure travel.

The "travel industry," as used herein, refers to the collection of 15 types of businesses that provide goods and services to the traveler or potential traveler at the retail level (see Appendix B: Glossary of Terms). These business types are defined by the Office of Management and Budget in its system of Standard Industrial Classifications (SIC).¹ In each case, the relevant SIC code is included.

A "travel expenditure" is assumed to take place whenever a traveler exchanges money for an activity considered part of his trip. Total travel expenditures are separated into 14 categories representing traveler purchases of goods and services at the retail level. Travel expenditures are allocated among states by simulating where the exchange of money for goods or services actually took place. By their nature, some travel expenditures are assumed to occur at the traveler's origin, some at his destination, and some enroute.

"Economic impact" is represented by measures of spending, employment, payroll, business receipts and tax revenues generated by traveler spending. "Payroll" includes all forms of compensation, such as salaries, wages, commissions, bonuses, vacation allowances, sick leave pay and the value of payments in kind paid during the year to all employees. Payroll is reported before deductions for social security, income tax

¹Office of Management and Budget, U.S. Executive Office of the President, Standard Industrial Classification Manual, 1987, U.S. Government Printing Office, Washington, D.C., 1988, 649 pp.

insurance, union dues, etc. This definition follows that used by the U.S. Census Bureau in the quinquennial Census of Service Industries.²

"Employment" represents the number of jobs generated by traveler spending, both full and part-time. As such, it is consistent with the U.S. Department of Labor series on nonagricultural payroll employment.³ "Tax revenues" include corporate income, individual income, sales and gross receipts, and excise taxes by level of government.⁴ "Business receipts" reflect travel expenditures less the sales and excise taxes imposed on those expenditures.

Description of the Model

The basic data on travel activity levels (e.g., number of miles traveled by mode of transportation, the number of nights away from home spent by type of accommodation) are available from the U.S. Travel Data Center's National Travel Survey (NTS) and Smith Travel Research's Hotel and Motel Survey. Generally, the TEIM combines the activity levels for trips to places within the United States with the appropriate average costs of each unit of travel activity, (e.g., cost per mile by mode of transport, cost per night by type of accommodation), to produce estimates of the total amount spent on each of 15 categories of travel-related goods and services by state. For example, the number of automobile miles traveled from one origin state to another, visited, state is equal to the total number of straight line miles produced by the travelers from the origin state multiplied by the ratio of the total number of days spent in all states by those travelers. The operating cost per mile for the state visited is then multiplied by the number of miles traveled in the state to determine the variable auto expenditure in that state.

²U.S. Bureau of the Census, Census of Service Industries, 1987, Area Series, United States, U.S. Government Printing Office, Washington, D.C., 1989, p. A3.

³U.S. Department of Labor, Handbook of Labor Statistics, 1975, U.S. Government Printing Office, Washington, D.C., 1979, p. A3.

⁴Advisory Commission on Intergovernmental Relations, State-local Finances: Significant Features and Suggested legislation, 1989 U.S. Government Printing Office, Washington, D.C., 1990.

The TEIM depends significantly on the U.S. Travel Data Center's National Travel Survey (NTS) and Smith Travel Research's Hotel and Motel Survey for its estimates of travel spending by state. Only three business categories' impacts (motor coach, railroad, and cruiseships) are estimated without the NTS or Smith Travel Research data. The impacts of motor coach travel are estimated with data from Greyhound Corporation and the Enos Foundation. Estimates of cruiseships' impacts are generated from Cruise Lines International Association data, and railroad travel estimates are from Amtrack.

The NTS is used to estimate activity levels for air travel, taxicabs, and automobile/truck ownership, operation, and rental. Smith Travel Research data is used to estimate hotel and motel revenues for each state. In conjunction with NTS data, Smith Travel Research data is also used to estimate the activity levels for other commercial lodging, second home use, visits to friends and relatives, and camper person nights. Estimates of the number of days and nights spent away from home for these activities are developed by the following method. Smith Travel Research's estimate of annual room revenues is divided by their estimate of average room rate to obtain the number of room nights. For each state, these nights are estimated by multiplying the number of hotel/motel nights for the region in which the state is located, as estimated from the NTS data base.

The 1987 NTS comprised information on 6,500 qualifying trips reported by 4,650 respondents in more than 18 thousand interviews among 12 national probability samples of the U.S. population during the year. This volume of trips was not enough, however, to provide estimates for travel between every possible pair of states.

Consequently, the following methodology was developed by Dr. Darryl Jenkins, consultant to the Data Center, to derive estimates of the number of person-trips from each state as an origin to each state as a destination from the NTS.

First, NTS samples for 1986 and 1988 were adjusted to the 1987 base and combined with the 1987 sample. Then, a matrix of estimates of person-trips from every state as an origin to every state as a destination was estimated from the combined NTS sample using the "bootstrapping" method.

Bootstrapping is designed to increase the size of a sample in order to better apply parametric analysis. It assumes a given sample is representative of its overall population, and then constructs a larger sample by sampling with replacement from the

original sample. The resulting distribution is the same as the original NTS sample but with many more observations available for conducting regression experiments.

The combined NTS sample for 1987 provided statistics significant at the .05 level for national and regional estimates but was inadequate for estimating state level person-trip volumes. Consequently, multiple samples were drawn from the NTS combined sample with replacement, ultimately providing over 300,000 observations from the original combined sample of nearly 20,000 observations.

Person-trip flows between the nine Census regions were examined and two regions were found to provide the most complete and reliable estimates of origin-destination travel: the Middle Atlantic region (New York, New Jersey, Pennsylvania), and the East North Central region (Ohio, Indiana, Illinois, Michigan, Wisconsin).

Beginning with the Middle Atlantic region, person-trips (the dependent variable) between New York as an origin and each destination state for which there were reliable estimates were regressed against two independent variables: the populations of the state pairs and the straight-line distance between the centroids of New York and each of these states. Following is the regression equation that provided the best fit:

$$Y^{(genB2)} = A + e^{(genB2)} + e^{(genB2)} + \epsilon,$$

where Y = person-trips between New York and another state

e = the irrational number 2.7182...

A = a constant term

genB2 = generalized beta two distribution

P = combined population of the two states

D = distance between the centroids of the two states

ϵ = the error term

The residuals from the estimated equations were then plotted in a stem-leaf display for state pairs to identify their distribution. The same functional form as above best provided the best fit. Using this form, the residuals were then regressed against person-trips for each state pair, and the equation used to estimate the residual corresponding to each state-pair person-trip estimate. This estimate was then added to the state-pair person-trip estimate from the original regression to produce the final estimates of person-trips between states.

This method accounted for more than 95 percent of the variance, and the resulting estimates were within +2% and -2% of the direct estimates for each of the state pairs, indicating the equations were successful in allocating the residuals.

A similar process was used for New Jersey and Pennsylvania, the other states in the Middle Atlantic region. The three sets of state pair estimates were aggregated into 8 region pairs and the estimates of origin-destination person-trip flows from the Middle Atlantic region to each of the other regions were compared with the direct estimates of these magnitudes from the National Travel Survey. The derived estimates of travel among region pairs were within +5% and -5% of the direct estimates in every case.

The process was further tested on the states of the East North Central region and produced similarly good results. Having validated these models for the two regions with the most reliable direct estimates, similar models were developed for the remaining state pairs. The aggregation of state pair estimates into region pairs indicated the models produced estimates within +5% and -5% of the NTS sample estimates for inter-regional travel.

The results include travel expenditures in each of the 15 categories for each state, which represent expenditures on overnight trips away from home in paid accommodations, and day trips to places 100 miles or more away from home.

The Economic Impact Component of the TEIM estimates travel-generated business receipts, employment, and payroll. Basically, the 15 types of travel expenditures are associated with 15 different types of travel-related businesses. For example, traveler spending on commercial lodging in a state is related to the business receipts, employment and payroll of hotels, motels and motor hotels (SIC 701) in the state. It is assumed that travel spending in each category, less sales and excise taxes, equals business receipts for the related business type as defined by the U.S. Census Bureau.

It is assumed that each job in a specific type of business in a state is supported by some amount of business receipts and that each dollar of wages and salaries is similarly supported by some dollar volume of business receipts. The ratios of employment to business receipts are computed for each industry in each state. These ratios are then multiplied by the total amount of business receipts generated by traveler spending in a particular type of business to obtain the measures of travel generated

employment and payroll of each type of business in each state. For example, the ratio of employees to business receipts in Maryland commercial lodging establishments is multiplied by travel generated business receipts of these establishments to obtain traveler generated employment in commercial lodging. A similar process is used for the payroll estimates.

The Fiscal Impact Component of the TEIM is used to estimate traveler generated tax revenues of federal, state and local governments. The yield of each type of tax is related to the best measure of the relevant tax base available for each state consistent with the output of the Economic Impact Component. The ratios of yield to base for each type of tax in each state is then applied to the appropriate primary level output to obtain estimates of tax receipts generated by travel. For example, the ratio of Maryland State personal income tax collections to payroll in the state is applied to total travel generated payroll to obtain the estimate of state personal income tax receipts attributable to traveler spending in Maryland.

The 1987 benchmark estimates of travel expenditures, and travel generated employment, payroll and federal, state and local tax revenue, are updated for each successive year. Data from the U.S. Bureau of the Census, Smith Travel Research, Enos Foundation, Runzheimer International, Cruise Lines International Association, Prentice-Hall, U.S. Department of Labor's Consumer Expenditure Survey and ES-202, American Society of Travel Agents, the Federal Aviation Administration, the Department of Transportation, Amtrak, the Federal Highway Administration, state revenue departments, the Data Center's National Travel Survey and other sources are used for this purpose. These data indicate the change in travel spending for each of the expenditure categories for each state over the previous year, as well as changes in the relationship of travel spending to employment, payroll and tax revenue.

Limitations of the Study

This study is designed to indicate the impact of U.S. traveler expenditures on employment, payroll, business receipts and tax revenue in each of the states. These impact estimates reflect the limitations inherent in the definition of travel expenditures. Two important classes of travel-related expenses have not been estimated due to lack of sufficient data. Consumers purchase certain goods and services in anticipation of a trip away from home. These include sports equipment (tennis racquet, skis, scuba gear, etc.), travel books and guides, and services such as language lessons and lessons for participatory sports (tennis, skiing, underwater diving, etc.). Although the

magnitude of these purchases in preparation for a trip cannot be quantified, it is probably significant relative to overall travel expenditures.

The second type of spending not covered due to lack of sound, relevant data is the purchase of major consumer durables generally related to outdoor recreation on trips. While recreational vehicles (campers, motor homes, trailers and mobile homes) are covered, spending for boats and boating supplies, and off-road recreational vehicles such as trail bikes, dune buggies and snowmobiles are not. Further research is required in this area to estimate the average spending on items such as these by travelers.

Moreover, the TEIM records travel expenditures only for those states where travelers spent the night, originated, or were destined. Due to the nature of the National Travel Survey, expenditures could not be allocated to states passed through in a single day. It is believed these expenditures may be quite significant to certain "bridge" states between major population concentrations and major destinations.

The trip definition inherent in this study also limits the estimates of economic impact somewhat. Specifically excluded are the economic effects of U.S. traveler expenditures in this country pursuant to traveling to a foreign destination. Also excluded is the impact of day-trips to places less than 100 miles from home. While these latter trips may be quite numerous, intuitively, they appear to involve little economic impact since lodging expenditures and virtually all common carrier spending are excluded. Meal, entertainment and recreation expenditures on these trips also seem relatively insignificant.

These travel expenditures and impact estimates are based on household surveys of travel activity. Consequently, they are subject to all of the sampling and non-sampling errors inherent in sample surveys.

Most travel expenditure data collected is on a "type of purchase" rather than "point of purchase" basis. This means there is some incongruity in matching spending on different goods and services while traveling with the receipts, employment and payroll of different types of businesses. For example, all spending for meals is assumed to take place in eating and drinking places (SIC 58) or grocery stores (SIC 54), whereas some may actually occur in hotels or other commercial lodging places (701). This inconsistency does not appear to introduce major errors in the calculations and can only be corrected upon collection of point-of-purchase expenditure data.

Appendix C: Glossary of Terms

GLOSSARY OF TERMS

Automobile Transportation Expenditure. This category includes a prorated share of the fixed costs of owning an automobile, truck, camper, or other recreational vehicle, such as insurance, license fees, tax, and depreciation costs. Also included are the variable costs of operating an automobile, truck, camper, or other recreational vehicle on a trip, such as gasoline, oil, tires, and repairs. The costs of renting an automobile or other motor vehicle are included in this category as well.

Automobile Transportation Industry. Automotive dealers and gasoline service stations (SIC 55); automotive rental and leasing without drivers (751).

Entertainment/Recreation Expenditure. Traveler spending on recreation facility user fees, admissions at amusement parks and attractions, attendance at nightclubs, movies, legitimate shows, sports events, and other forms of entertainment and recreation while traveling.

Entertainment/Recreation Industry. Amusement and recreation services (SIC 79) and motion picture theaters (783).

Food Expenditure. Traveler spending in commercial eating facilities and grocery stores or carry-outs, as well as on food purchased for off-premise consumption.

Foodservice Industry. Eating and drinking places (SIC 58).

General Retail Trade Industry. This sector is defined to receive incidental purchases by travelers. It includes general merchandise group stores (SIC 53) and miscellaneous retail stores (59).

Incidental Purchase Expenditure. Traveler spending on retail trade purchases including gifts for others, medicine, cosmetics, clothing, personal services, souvenirs, and other items of this nature.

Incidental Purchase Industry. See "General Retail Trade Industry."

Lodging Industry. This industry includes hotels, motels, and motor hotels (SIC 701), camps and trailers parks (703), and general building contractors -- residential buildings (152) and operative builders (1531).

Public Transportation Expenditures. This includes traveler spending on air, bus, rail and boat/ship transportation, and taxicab or limousine service between airports and central cities. Also included are expenditures on "other transportation" as indicated in the 1987 National Travel Survey.

Public Transportation Industry. Air transportation (SIC 45), taxicab companies (412), intercity highway passenger transportation (413), National Railroad Passenger Corporation (Amtrak), and water transportation (44 except 4411). Also is the "dummy" industry of "other transportation."

Tourism. Generally avoided in this study, this can be used to refer to pleasure or personal travel, a subset of travel.

Travel. The act of taking a "trip" (gg.v).

Travel Arrangement Industry. This includes travel agencies, tour operators, and other services in arranging passenger transportation, and is covered under SIC 4722.

Traveler. Person taking a "trip" (gg.v).

Travel Expenditure. The exchange of money or the promise of money for goods or service while traveling, including any advance purchase of public transportation tickets, lodging or other items normally considered incidental to travel, but which may be purchased in advance of the trip. In addition, certain of the "fixed" or capital costs of owning a motor vehicle (including campers, motor homes, etc.) or a vacation or second home are included as associated with taking a trip. Generally, expenditures are assumed to take place at the point where the good or service is bought while traveling. The two exceptions to this rule are that the fixed costs of operating a motor vehicle while on a trip are allocated to the traveler's area of residence, and the "imputed rent" of spending nights in the traveler's own vacation home are allocated to the area visited.

Travel generated Employment. The number of jobs attributable to travel expenditures in an area. These estimates of employment follow the "establishment payroll survey definition" rather than the "household survey definition." Consequently, the TEIM estimates are more closely related to the number of jobs than to the number of employees. For a detailed description of the household and establishment survey differences, see Green, Gloria P., "Comparing Employment Estimates from Household and Payroll Surveys," Monthly Labor Review, Volume 92, No. 12, December, 1969.

Travel generated Payroll. This is the payroll, or wage and salary income, attributable to travel expenditures in an area. Payroll includes all forms of compensation, such as salaries, wages, commissions, bonuses, vacation allowances, sick leave pay, and the value of payments in kind (such as free meals and lodgings) paid during the year to all employees. Trips and gratuities received by employees from patrons and reported to employers are included. For corporations, it includes amounts paid to officers and executives; for unincorporated businesses, it does not include profit nor other compensation of proprietors or partners. Payroll is reported before deductions for social security, income tax, insurance, union dues, etc.

Travel generated Tax Receipts. These federal, state and local tax revenues attributable to travel in an area. For a given state locality, all or some of the taxes may apply. "Local" includes county, city or municipality, and township units of government actually

collecting the receipts, and not the level that may end up receiving it through intergovernmental transfers.

Federal. These receipts include corporate income taxes, individual income taxes, employment taxes, gasoline excise taxes, and, airline ticket taxes.

State. These receipts include corporate income taxes, individual income taxes, sales and gross receipts taxes, and excise taxes.

Local. These include county and city receipts from individual and corporate income taxes, sales, excise and gross receipts taxes, and property taxes.

Travel-generated Wage and Salary Income. The same as "travel generated payroll."

Trip. A trip occurs, for the purpose of the model, every time one or more persons goes to a place 100 miles or more away from home in one day, or is out-of-town one or more nights in paid accommodations, and returns to his origin. Specifically excluded from this definition are: (1) travel as part of an operating crew on a train, plane, bus, truck or ship; (2) commuting to a place of work; (3) student trips to school or those taken while in school. Also excluded, except where specified, is foreign travel activity in the U.S.

Visitor. This term is usually limited to special studies of individual cities or metropolitan areas. It includes those not residing in the area under study who travel away from home overnight or on a day trip of 200 round-trip miles or more and visit the area. As a general rule, total travel impact on an area less the impact of area residents equals visitor impact.

Appendix D: Industries Providing More Jobs than Travel by State, 1989

Industries Providing More Jobs than Travel,
by State, 1989

<u>State</u>	<u>Industry SIC codes*</u>
Alabama	23,58pt.,73,80
Arizona	80
Arkansas	20,80
California	73,58pt.,80
Connecticut	17,34,35,36,37,50,54,58pt.,59,60,63,73,80
Delaware	28,58pt.,60,73,80
Idaho	80
Illinois	50,58pt.,73,80
Indiana	36,37,50,58pt.,73,80
Iowa	20,35,51,58pt.,80
Kansas	37,50,58pt.,73,80
Kentucky	58pt.,80
Louisiana	80
Maine	58pt.,80
Maryland	17,50,58pt.,73,80,87
Massachusetts	35,50,58pt.,73,80,87
Michigan	34,37,50,58pt.,73,80
Minnesota	35,58pt.,73,80
Mississippi	23,80
Missouri	58pt.,80
Montana	80
Nebraska	20,58pt.,73,80
New Hampshire	17,54,58pt.,73,80
New Jersey	73,80
New York	58pt.,73,80

Industries Providing More Jobs than Travel,
by State, 1989

<u>State</u>	<u>Industry SIC codes*</u>
North Carolina	22,80
North Dakota	80
Ohio	34,35,37,50,54,58pt.,73,80
Oklahoma	58pt.,80
Oregon	24,58pt.,80
Pennsylvania	50,54,58pt.,73,80
Rhode island	17,22,34,39,50,51,53,54,58pt.,59,60,73,80,82,83
South Carolina	22
South Dakota	80
Tennessee	80
Texas	58pt.,73,80
Utah	80
Vermont	80
Virginia	73
Washington	37,58pt.,73,80
West Virginia	54,58pt.,80
Wisconsin	35,58pt.,73,80
D.C	73,87
U.S. total	58pt.,73,80

*Key to SIC codes is on following page.

Source: U.S. Travel Data Center

Key to SIC codes

Mining

- 12 Bituminous coal and lignite mining
- 13 Oil and gas extraction
- 17 Special trade contractors

Manufacturing

- 22 Textile mill products
- 23 Apparel and other textile products
- 24 Lumber and wood products
- 28 Chemicals and allied products
- 33 Primary metal industries
- 34 Fabricated metal products
- 35 Machinery, except electrical
- 36 Electric and electronic equipment
- 37 Transportation equipment
- 39 Miscellaneous manufacturing industries

Retail trade

- 50 Wholesale trade-durable goods
- 54 Food stores
- 58pt. Eating and drinking place sales to residents
- 59pt. Miscellaneous retail sales to residents

Finance, insurance and real estate

- 60 Banking
- 63 Insurance carriers

Services

- 73 Business services
 - 80 Health services
 - 82 Educational services
 - 86 Membership organizations
-

Appendix E: Regional Input-Output Modeling System

RIMS II

Many types of public sector and private sector decisions require an evaluation of probable regional effects. For example, Federal requirements for environmental impact statements and the urban impact of Federal policies necessitate regional impact analyses. A growing concern, therefore, about the effects of public and private decisions has created a demand for regional economic models.

As a result of this demand, economic impact models have been developed for many States and regions. These models vary considerably in terms of structure, reliability, sectoral and geographical detail, flexibility in application, and cost of development and use. In general, the models that provide the most reliable and industrially-detailed secondary impact estimates are the most expensive to construct, while the less costly models that can be used in numerous small-area studies often provide less accurate estimates.

In response to the growing need for improved techniques for regional impact analysis, the Regional Economic Analysis Division of the Bureau of Economic Analysis (BEA) developed the Regional Industrial Multiplier System (RIMS) in the mid-1970's. RIMS was designed to estimate input-output type multipliers for use in estimating the secondary regional impacts of public and private economic development policies. RIMS was capable of estimating multipliers for any region composed of one or more contiguous counties and for any of the 478 industrial sectors in the 1967 BEA national input-output (I-O) table. A significant improvement over the more summary measures often used in regional impact analysis, RIMS was capable of providing reliable multiplier estimates without the high cost of gathering survey data.

The Regional Input-Output Modeling System (RIMS II) is a major revision of RIMS. The basic differences between RIMS II and RIMS are the use of more recent national I-O tables (1972 and 1977), the use of more detailed and more current data for regionalizing the national I-O tables, and greater flexibility in the derivation of regional impact estimates through the use of a matrix inversion technique that provides industrially-disaggregated impacts. RIMS II developmental research is focused currently on estimating regional transactions tables, and comparing RIMS II estimates of state-specific imports and exports with survey-based estimates from the Census Bureau's

Commodity Transportation Survey. RIMS II is also being adapted to analyze the regional and industrial impacts of defense procurement.

RIMS II Methodology

In order to estimate impacts such as those presented above RIMS II uses the BEA national I-O tables, which show the input and output structure of 500 industries. Since firms in all national industries are not found in each region, some direct requirements that are not produced in a study region are identified, using Bureau of Economic Analysis (BEA) 4-digit Standard Industrial Classification (SIC) county earnings data. The earnings data are used as proxies for the industry-specific input and output data which are seldom available at the small-area level. Using the same earning data, the resulting regional I-O table then can be aggregated to the level of industrial detail appropriate for the impact study.

More specifically, the RIMS II approach can be viewed as three-step process. In the first step, the national I-O matrix is made region-specific by using corresponding 4-digit SIC location quotients (LQ's). The LQ's are used to estimate the extent to which requirements are supplied by firms within the region. For this purpose, RIMS II employs LQ's based on two types of data. According to this mixed-LQ approach, BEA county personal income data, by place of residence, are used for the calculation of LQ's in the service sectors, while BEA earnings data, by place of work, are used for the LQ's in the nonservice sectors.

The second step involves estimations of the household row and the household column of the matrix. The household-row coefficients are estimated based on value-added gross-output ratios from the national I-O table and introduced into each industry's coefficient column. A household column is constructed, based on national consumption and savings rate data and national and regional tax rate data.

The last step in the RIMS II estimating procedure is to calculate the multipliers. Since it is most often necessary to trace the impact of changes in final demand on numerous individual directly-and indirectly-affected industries, RIMS II applications employ the Leontief inversion approach for obtaining multipliers. This inversion process produces output and earnings multipliers for all additionally affected industries.

Accuracy of RIMS II

Empirical test of the accuracy of RIMS II multipliers indicate that RIMS II yields estimated that are not substantially different from those generated by regional I-O models based on the costly gathering of survey data. For example, a comparison of 224 industry-specific multipliers from survey based tables for Texas, Washington, and West Virginia indicate that the RIMS II average multipliers overestimate the average multipliers from the survey-based tables by approximately 5 percent, and, for the majority of individual industry-specific multipliers is less than 10 percent. In addition, RIMS II and survey multipliers show a statistically-similar distribution of affected industries.

Advantages of RIMS II

There are numerous advantages to RIMS II. First, it is possible to provide estimates of economic impact without building a complete survey I-O model for each region under study, since RIMS II produces multipliers that are derived from secondary data sources. Second, the RIMS II multipliers are derived from a limited number of secondary data source, thus eliminating the costs associated with the compilation of data from a wide variety of these sources. Third, because of the disaggregated sectoring plan employed by RIMS II, analysis may be performed at a detailed industrial level, thereby avoiding aggregation errors that often occur when different industries are combined. Fourth, the RIMS II multipliers are based on a consistent set of procedures across areas, thus making comparisons among areas more meaningful than would be the case if the results were obtained from incompatible impact models designed only for individual area. Fifth, the multipliers can be updated to reflect the most recent local area earning and personal income data.

The industrial output and personal earnings impacts estimated by RIMS II can be crucial for estimating effects not directly specified by RIMS II itself. For example, the estimation of regional fiscal, labor migration, and environmental effects often depends on the estimation of the regional output and earnings impact of the initial stimulus. Since many of these important effects are often best analyzed on a case-by-case basis, one of the major advantages of using RIMS II is that valuable research resources can be spent on the analysis of these effects, rather than on the construction of an impact model. Therefore, when using RIMS II, a cost-effective impact study might devote most of its research budget to specifying initial impacts in industry specific detail, and

analyzing the implications for other important aspects of regional economic activity of the RIMS II estimates impacts.

Applications of RIMS II

RIMS II multipliers, like the original RIMS multipliers, can be used in various types of impact studies. For example, the U.S. Nuclear Regulatory Commission has used RIMS II multipliers in the environmental impact statements required for licensing nuclear electricity-generated facilities. The U.S. Department of Housing and Urban Development (HUD) has used RIMS multipliers to assess the effects of various types of urban redevelopment expenditures. Specifically, BEA was able to quantify probable regional impacts based on the size, type, and location of the numerous individuals and groups outside the Federal Government. These multipliers have been used in analyzing the regional economic impacts of various projects, such as the operation of a prototype coal gasification plant, the expansion of port facilities, the reclamation of strip-mined land, the adoption of alternative energy futures, and the construction of mass transit facilities.

In August 1982, Association for University Business and Economic Research (AUBER) published a paper, "RIMS II: Overview and Applications," which, in addition to presenting an annotated review of regional economic modeling approached, describes the results of several recent applications of RIMS II and indicates several ongoing RIMS II-based research projects. The paper is contained in Readings in Business and Economic Research (Vol. 3), available from Professor William A. Strang, Secretary-Treasurer of AUBER, Office of Research Administration, Graduate School of Business, University of Wisconsin-Madison, 1155 Observatory Drive, Madison, Wisconsin 53707.

A paper, "Trade in Regional I-O Tables", presented at the 1984 annual meetings of the Southern Regional Science Association, describes ongoing research undertaken (1) to evaluate further the usefulness of the techniques underlying RIMS II, and (2) to extend the RIMS II model beyond the estimation of regional transactions tables, as well as the levels of industry-specific imports and exports by state. As discussed in the paper, the research to date has focused on comparisons of estimates from the Census Bureau's Commodity Transportation Survey with those from RIMS II-based models. The report is available for copying cost (10.00) from the Regional Economic Analysis Division, BE-61, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, D.C. 20230.

RIMS II Multipliers

RIMS II multipliers are intended to show the total regional effects on industrial output and personal earnings for any county or group of counties in the United States and for any of the 500 industrial sectors in the 1972 and 1977 BEA national I-O tables. More specifically, RIMS II multipliers can be used to estimate changes in total regional output and earnings resulting from changes in regional final demand for the output of specific industries. Regional output in the I-O context is similar to sales and includes sales to industries in the region and to final demand. In RIMS II, final demand includes sales to government, other regions, and capital formation.

For example, based on RIMS II multipliers, \$1 million of new warehouse construction in the Denver-Boulder, Colorado MSA would increase personal earnings in the MSA by \$.7 million; the same expenditure in the Wilmington, North Carolina MSA would increase earnings there by \$.5 million. The difference between the earnings impacts in the two MSA's occurs because the Denver-Boulder economy locally provides more of the total input requirements for construction warehoused than does the Wilmington economy. In general, multipliers are smaller in smaller regional economies. However, multipliers and estimated regional impacts also depend on which industry is initially affected. For example, if the initial \$1 million were spent on the maintenance and repair of streets in Wilmington, the earnings effect there would be \$.7 million, which is the same as the effect of a \$1 million expenditure for warehouse construction in the larger Denver-Boulder metropolitan area.

This overview briefly describes RIMS II multipliers, the multiplier-estimation procedures, and some of the advantages and uses of RIMS II. For additional information, see Regional Input-Output Modeling Systems (RIMS II), which is available from the U.S. Government Printing Office.*

*Regional Input-Output Modeling System (RIMS II): Estimation, Evaluation, and Application of Disaggregated Regional Impact Model, available through National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; accession number PB-82-168-865; cost \$16.00.

Appendix F: Sources

SOURCES

This appendix presents the sources of data used in this report. Only the most current year is presented.

Organizations

Air Transport Association
American Automobile Association
Amtrak
American Society of Travel Agents
Bureau of Labor Statistics, U.S. Department of Labor
Cruise Lines International Association
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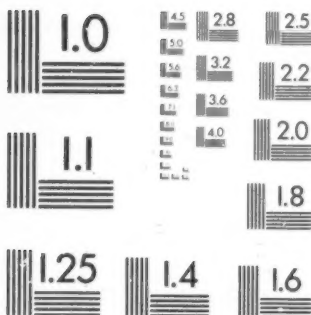
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MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



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